# APPENDIX - II

## Application for Scriber

**Please fill up the DECLARATION and submit the same to Exam Section**

### DECLARATION

1. We, the undersigned, Mr/Ms,……………………………………………………………………

   Registration number………….………..…… Department……………………….…… and

   Mr./Ms.…………………………………….......... Writer (scribe) for the eligible student, do hereby declare that: -

   a) The scribe is identified by the student at his/her own cost and as per own choice. The student is blind/low vision or affected by cerebral palsy with loco-motor impairment, or other neurological disorder because of which his/her writing speed is affected permanently for any reason, and s/he needs a writer (scribe) as per law governing them and guidelines issued by the competent authorities in this regard.

   b) As per the rules, the student availing services of a scribe is eligible for compensatory time of 20 minutes for every hour of the examination.

   c) The medical certificate furnished by the student is issued by competent authority and is the latest one.

   d) We jointly understand that the scribe shall only record the answer as suggested by the student and shall not import his/her knowledge/make any gesture/sound or movement to indicate correctness or otherwise of any answer.

   e) We undertake to comply with the directions of the invigilator at the Examination room and try not to disturb other examinees.
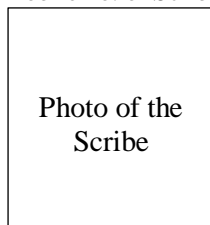
   f) Highest qualification of scribe is XII Standard or equivalent and Copy of Marksheet/ Certificate is attached herewith.

   g) Any misconduct committed by the scribe shall amount to a misconduct committed by the student who is using the Scribe and is liable for disciplinary action as may be deemed appropriate.

   h) We hereby declare that all the above statements made by us are true and correct to the best of our knowledge and belief. We also understand that if at any stage we do not fulfil the eligibility norm and/or that the information furnished by us is incorrect/false or that we have suppressed any material fact(s), the examination of the student will stand cancelled.

Name and Signature of Scribe                                                  Name and Signature of Student
Mobile no. of Scribe                                                              Email id and Mobile no. of Student

| Photo of the Scribe |
|---|

(Controller of Examination)

# Application for Duplicate ID

Date: ………………………

To,

Head of the Department
Manipal University Jaipur

**Subject**: **Request to issue Duplicate ID Card for Exam**

Sir/Madam,
I ………………………………………………lost/forgot to bring my ID Card. I request you to permit me to give today's exam.
I declare that if I found ineligible to give the exam due to attendance and other requirements my exam shall be cancelled without any notice.
Thanking you

**Yours sincerely**

(*Name*: …………………………………………………………)
*Reg. No*. …………………………………………………………

_____

Permission to give exam

Permit  *Mr./Ms.* ………………………………………………………………………..to appear in today's examination.

Date: ………………………

**(HoD/Departmental Exam Coordinator)**

**(Chief Superintendent)**

## Application for issue of **Duplicate Grade Cards**

**Name:** _____
(in Block Letters)

Registration No.: ☐☐☐☐☐☐☐☐

Address: -

_____

_____PIN ☐☐☐☐☐☐

Request for the issue grade cards of _____ Semester

| Programme / Specialization | |
|---|---|

Note: *For duplicate Grade card (if lost) enclose an affidavit and copy of the police complaint.*

**DETAILS OF FEE PAID**

☐ Cash      ☐ DD    ☐ Online

(Amount of Rs. _____ in favour of "Manipal University Jaipur" payable at Jaipur.)

DD No./ Receipt No./Transaction No. _____ Date_____

Name of Bank (DD)_____

Finance & Accounts section

**Signature of the Student**      **Verified by Finance Section**      **Signature of HoD**

| For Official Use |
|---|

Issued (i) Duplicate Grade Card of_____Sem./Year

   (ii) Duplicate Grade Card Sr.No_____

Signature of the Official                                   Dispatched On:

# MANIPAL UNIVERSITY JAIPUR

## Application for issue of **OFFICIAL TRANSCRIPTS**

**Name:** _____
(in Block Letters)

Registration No.: ☐☐☐☐☐☐☐☐

Programme studied with specialization: _____

Month & Year of Completion of the Programme: _____

Total Credits Earned_____CGPA_____

Address: _____

_____

_____

PIN ☐☐☐☐☐☐

Mobile                                        No._____

Number of transcripts required: _____

**Signature of the Candidate**                                        **Signature of HoD**

---

**DETAILS OF FEE PAID**

☐ Cash       ☐ DD       ☐ Online

(Amount of Rs.                          in favour of "Manipal University Jaipur" payable at Jaipur.)

DD No./ Receipt No./Transaction No._____Date_____
Name of Bank (DD)_____

Finance & Accounts section

---

| For Official Use |

Total Credits_____CGPA_____No. of transcripts issued_____ ,
Transcripts Nos _____

Signature of the Official                                        Dispatched on_____

---

# MANIPAL UNIVERSITY JAIPUR

## Application for Original Degree Certificate

| Name | | | Reg. No | | | | | | | |
|------|--|--|---------|--|--|--|--|--|--|--|

| Programme | | |
|-----------|--|--|
| Branch/Specialization Month & | | *Affix self-attested Passport sizecolour photograph* |
| CGPA obtained | | |

| Mode of delivery | In Person | By Courier/Speed Post |
|------------------|-----------|-----------------------|
| Address to which certificate is to be sent (IN BLOCK LETTERS ONLY | ☐      ☐ | |
| | | |
| | Pin code | |
| Mobile No: | e-mail: | |

Details of fees paid: (if applicable)

| DD/Challan No. and date | Bank Name | DD Amount |
|-------------------------|-----------|-----------|
| | | |

**Finance & Accounts section**

I hereby solemnly declare and promise that if admitted to the degree/diploma for which I have been recommended, I shall conduct myself as befits a graduate/postgraduate of Manipal University Jaipur and that I shall with sincerity support the cause of morality and sound learning and that I shall uphold and advance the social order and the well-being of my fellowmen. Further, I shall faithfully adhere to the ethics of the profession to which I am admitted by virtue of my degree and I shall maintain its purity and reputation without making my knowledge subservient to unworthy ends.

Place:

Date:                            **Signature of the Candidate**

**Verified and Recommended by:**

                         **Signature and stamp of the Head of the Department**

**For official Use only**

Application received on:          Mode of Dispatch:          Dispatched on:

Received By:

(Name and Signature with date)

# MANIPAL UNIVERSITY JAIPUR

## Authorization Letter

To
The Controller of Examinations
Manipal University Jaipur

Affix Latest Passport size photograph

Subject:……………………………………………………….......................................
……………………………………………………………………………………………..
Respected Sir/Madam
I, ……………………………….hereby authorize Mr./Ms./Mrs.…………………...........................................
to collect my (Doc.) …………………………..……………………………........................................on my behalf.

| Detail of Receiver (Fill in Capital Letters) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Full Name of Receiver | | | | | | | |
| Relation | | | | | | | |
| Reg. No. (if student of MUJ) | | | | | | | |
| Prog./Specialization (if student of MUJ) | | | | | | | |
| Full Address : | | | | | | | |
| Contact No. | | | | | | | |
| Attached Self Attested Id Proof (any one) | Type : - | Pan Card | Driving License | Aadhar Card | Voter Id | Passport Id | Other Valid ID |
| | Receiver | | | | | | |
| | Applicant | | | | | | |

I hereby declare that all information given in the authorization letter is true and correct.
**Signature (Applicant)**
Name of Student              : …………………………………………………………………
Registration No.             : …………………………………………………………………
Prog.  /Specialization  : ………………………………………………………………….
Mobile No.                      : ………………………………………………………………….
E – Mail Id                     : ………………………………………………………………….
Thanking You

Place: …………………..                                                    Date: ……………...

**MANIPAL UNIVERSITY JAIPUR**
*INSPIRED BY LIFE*

## APPLICATION FORM FOR MIGRATION CERTIFICATE

| | |
|---|---|
| 1. Name of Candidate with correct postal address(In Block Letters): | |
| 2. Mobile No. | |
| 3. Name of the last examination appeared: (For Engineering exam, mention the branch) | |
| 4. Registration number with Year & Month of passing the above Examination: | |

Date: ………………………………                                    Signature of Candidate

---

**DETAILS OF FEE PAID**

☐ Cash      ☐ DD    ☐ Online
(Amount of Rs.                              in favour of "Manipal University Jaipur" payable at Jaipur.)

DD No./ Receipt No./Transaction No._____Date_____
Name of Bank(DD)_____

Finance & Accounts section

# MANIPAL UNIVERSITY JAIPUR

## Application for issue of **Provisional Pass Certificate**

**Name:** _____
(in Block Letters)

Registration No.: ☐☐☐☐☐☐☐☐☐

Address: _____

_____

PIN ☐☐☐☐☐

Mob. No. ☐☐☐☐☐☐☐☐☐☐

| Programme/Specialization | |
|---|---|
| Total Credits earned/CGPA | |

**DETAILS OF FEE PAID**

☐ Cash   ☐ DD   ☐ Online

(Amount of Rs. _____ in favour of "Manipal University Jaipur" payable at Jaipur.)

DD No./ Receipt No./Transaction No._____Date_____

Name of Bank(DD)_____

Finance & Accounts section

**Signature of the Student**　　　**Verified by Finance Section**　　　**Signature of HoD**

For Official Use

Total Credits_____CGPA_____

Provisional Certificate Sr.No_____

Signature of the Official

on_____　　　　　　　　　　　　　Dispatched

# MANIPAL UNIVERSITY JAIPUR

## Application for Re - issue of Original Degree Certificate

| Name | | Reg. No | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|

| | | |
|---|---|---|
| **Programe Branch/Specialization** | | *Affix self-attested passport size color photograph* |
| **Month & Year of Passing** | | |
| **CGPA obtained** | | |
| **Reason for Re – issue Degree** | | |

| Mod of delivery | ☐ Convocation | ☐ in Person | ☐ By speed post/courier |
|---|---|---|---|
| Address to which certificate is to be sent (IN BLOCK LETTERS | | | |
| | | | |
| | | | |
| | Pin code | | |
| Telephone/ Mobile No: | | e-mail: | |

Details of fees paid: (if applicable)

| DD/Challan No. and date | Bank Name | DD Amount |
|---|---|---|
| | | |

**Finance & Accounts section**

I hereby solemnly declare and promise that if admitted to the degree/diploma for which I have been recommended, I shall conduct myself as befits a graduate/postgraduate of Manipal University Jaipur and that I shall with sincerity support the cause of morality and sound learning and that I shall uphold and advance the social order and the well-being of my fellowmen. Further, I shall faithfully adhere to the ethics of the profession to which I am admitted by virtue of my degree and I shall maintain its purity and reputation without making my knowledge subservient to unworthy ends.

Place:

Date:

**Verified and Recommended by:**                                                    **Signature of the Candidate**

_____

**Signature and stamp of the Head of the Department**

**For official Use only**

Application received on:                    Mode of Dispatch:                    Dispatched on:

# APPENDIX - III

**MANIPAL UNIVERSITY JAIPUR**

JAIPUR - 303 007, RAJASTHAN, INDIA

Sl. No. 141001

## GRADE REPORT

| Grade | A⁺ | A | B | C | D | E | F/I/DT/S/U* |
|-------|-----|---|---|---|---|---|-------------|
| Grade Point | 10 | 9 | 8 | 7 | 6 | 5 | 0 |

* F : Fail, I : Incomplete, DT : Attendance Shortage, S : Satisfactory, U : Unsatisfactory

**Dean of the Faculty**
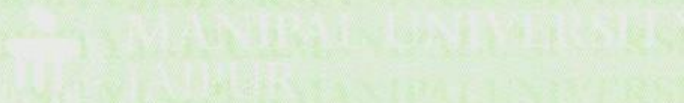(with seal)

**Controller of Examinations**
(with seal)

**MANIPAL UNIVERSITY**
JAIPUR

JAIPUR - 303 007, RAJASTHAN, INDIA

Sl. No. 01500

## PROVISIONAL CERTIFICATE

MANIPAL UNIVERSITY
JAIPUR

Dean of the Faculty
(with seal)

Controller of Examinations
(with seal)

# MANIPAL UNIVERSITY
## JAIPUR
JAIPUR - 303 007, RAJASTHAN, INDIA

Phone: +91-1412999100 e-mail: office.controller@jaipur.manipal.edu

Sl. No. 03629

Dean of the Faculty
(with seal)

Controller of Examinations
(with seal)

MUJ/Mig/100052

Registrar
Manipal University Jaipur

MANIPAL UNIVERSITY JAIPUR

Established under Act No. 21 of 2011, State of Rajasthan; Recognised u/s 2(f) of UGC Act, 1956

INSPIRED BY LIFE

Chairperson

President

# MANIPAL UNIVERSITY JAIPUR

Date: 22/07/2022

## Equivalence of CGPA with percentage of marks

At the Manipal University Jaipur the overall performance of a student is indicated by Grade Point Average (GPA) of a semester and Cumulative Grade Point Average (CGPA), the weighted average of GPAs of all semesters that the student has completed at any point of time. **The grades are awarded based on relative performance and it has no correlation with any fixed percentage of marks obtained. Though it is not possible to convert CGPA to aggregate percentage of marks, based on demand of Industries/organizations the following conversion factor was approved by the MUJ Academic Council.**

Percentage: CGPA × 10

Controller of Examinations

# MANIPAL UNIVERSITY JAIPUR

*INSPIRED BY LIFE*

## PROGRAMME

## *The Final Oral Examination for the Degree of DOCTOR OF PHILOSOPHY*

*Title of the Thesis:*

**"THEORETICAL STUDY OF NANOMATERIALS INVOKING DENSITY FUNCTIONAL THEORY BASED DESCRIPTORS"**

*Research Scholar:*
**Prabhat Ranjan**
**Department of Mechatronics Engineering**
**School of Automobile, Mechanical & Mechatronics**
**Manipal University Jaipur**

*Day, Date, Time and Venue:*
**Thursday, November 22, 2018 at 09.30 AM**
**Room No 307, 3rd Floor, 1AB Building**

*Guide:*
**Professor Dr Ajay Kumar**
**Faculty of Engineering**
**School of Automobile, Mechanical & Mechatronics**
**Manipal University Jaipur**

*Co - Guide:*
**Dr. Tanmoy Chakraborty**
**Associate Professor Faculty of Science**
**School of Basic Sciences**
**Manipal University Jaipur**

*Faculty and Research Scholars who are interested in the subject/thesis may please participate*

**ABSTRACT:**

Nanoalloy clusters offer remarkable physical and chemical properties, as it can be tuned by proper control of size, composition and structure. A number of scientific reports describe the effects of size and structure which change the electronic, optical and other physico-chemical properties of nanoalloy clusters. A deep insight into the research of nanoalloys with well-defined size and structure may lead to some other alternatives for much better performance. The transition metals of group 11 in the periodic table are of immense importance due to their significant electronic, optical, magnetic and catalytic properties. The positive conjoint effects of two or more noble metals on the above mentioned properties have been lucidly explained by researchers. Nowadays, different compositions of nanoalloys are utilized for advancement of methodologies and characterization techniques. Group 11 metal clusters (Cu, Ag and Au) exhibit the filled inner d-orbitals with one unpaired electron in the valance s-shell. This electronic arrangement is responsible for reproduction of exactly similar shell effects which are experimentally observed in the alkali metal clusters. The structural, electronic and optical properties of bimetallic Cu-Ag, Ag-Au, Cu-Au clusters invoking Density Functional Theory (DFT) based descriptors have been computed. We have also studied the conformational effect of these clusters by using DFT methodology. Density Functional Theory is very well known and most efficient technique of quantum mechanics to study the electronic properties of materials. Conceptual DFT based descriptors have turned to be an indispensable tools for analyzing and correlating the experimental properties of compounds.

Keywords: Nanoalloy; Bimetallic Clusters; Density Functional Theory; HOMO-LUMO Energy Gap; Odd-Even Oscillation; Regression Analysis;

**PUBLICATIONS:**
1. Ranjan P., Chakraborty T., Kumar A., 2018, Density Functional Study of Structures, Stabilities and Electronic Properties of $AgAu_n^{\lambda}$ $(\lambda = 0, \pm 1; n = 1-12)$ Clusters: Comparison with Pure Gold Clusters, **Mat. Sci.- Pol.,** (Accepted).
2. Ranjan P., Chakraborty T., Kumar A., 2017, Computational Study of Au Doped Cu Nanoalloy Clusters, **Nano Hybrids and Composites**, 17, pp. 62-71.
3. Ranjan P., Chakraborty T., Kumar A., 2017, Computational Investigation of Cationic, Anionic and Neutral $Ag_2Au_N$ (N=1-7) Nanoalloy Clusters, **Physical Sciences Reviews**, 2, 20160112; **DOI:** https://doi.org/10.1515/psr-2016-0112.
4. Ranjan P., Dhail S., Venigalla S., Kumar A., Ledwani L., Chakraborty T., 2015, A Theoretical Analysis of Bi-metallic (Cu-Ag)$_{n=1-7}$ Nano Alloy Clusters Invoking DFT Based Descriptors, **Mat. Sci.- Pol.,** 33, pp. 719-724.
5. Ranjan P., Venigalla S., Kumar A., Chakraborty T., 2014, Theoretical Study of Bi-metallic $Ag_mAu_n$ (m+n=2-8) Nano Alloy Clusters in terms of DFT Based Descriptors, **New Front. Chem.**, 23, pp. 111-122.
6. Venigalla S., Dhail S., Ranjan P., Jain S., Chakraborty T., 2014, Computational Study about Cytotoxicity of Metal Oxide nanoparticles Invoking Nano-QSAR Technique, **New Front. Chem.**, 23, pp. 123-130.

*Book Chapters:*
1. Ranjan P., Kumar A., Chakraborty T., 2018, Conformational Analysis of Ag-Au Nanoalloy Clusters: A CDFT Approach, **Composite Materials Engineering: Modeling and Technology**, CRC & Apple Academic Press, USA (In Press).
2. Ranjan P., Chakraborty T., Kumar A., 2018, Conformational Study of Bimetallic Trimers Cu-Ag Nanoalloy Clusters, **Research Notes on Nanoscience and Nanotechnology**, CRC & Apple Academic Press, USA (In Press).
3. Ranjan P., Chakraborty T., Kumar A., 2018, The Study of Physico-chemical Properties of Bimetallic CuAu$_n$ (n=1-8) Nanoalloy Clusters, **Research Notes on Nanoscience and Nanotechnology**, CRC & Apple Academic Press, USA (In Press).
4. Ranjan P., Kumar A., Chakraborty T., 2018, Structural, Electronic and Optical Properties of $AuCu_n^{\lambda}$ ($\lambda$= 0, ±1; n=1-8) Nanoalloy Clusters: A DFT Study, **Research Notes on Nanoscience and Nanotechnology**, CRC & Apple Academic Press, USA (In Press).
5. Shalini, Ranjan P, Chakraborty T., 2018, Theoretical Computation of Periodic Descriptors Invoking Periodic Properties, **Chemical Sciences and Engineering Technology**, CRC & Apple Academic Press, USA, ISBN- 9781771887052.
6. Ranjan P., Chakraborty T., Kumar A., 2018, Theoretical Analysis: Electronic, Raman, Vibrational and Magnetic Properties of Cu$_n$Ag (n=1-12) Nanoalloy Clusters, **Theoretical and Quantum Chemistry at the Dawn of the 21$^{st}$ Century**, CRC & Apple Academic Press, USA, ISBN-9781771886826.
7. Ranjan P., Chakraborty T., Kumar A., 2018, A Density Functional Study of Ag doped Cu Nanoalloy Clusters, **Innovations in Physical Chemistry: Monograph Series- Physical Chemistry for Engineering and Applied Sciences**, Vol. 4, CRC & Apple Academic Press, USA, ISBN- 9781771886277.
8. Ranjan P., Chakraborty T., Kumar A., 2018, Computational Investigation of Au doped Ag Nanoalloy Clusters: A DFT Study, **Innovations in Physical Chemistry: Methodologies and Applications for Analytical and Physical Chemistry**, Vol. 3, CRC & Apple Academic Press, USA, ISBN- 9781771886215.
9. Ranjan P., Chakraborty T., Kumar A., 2018, A Theoretical Study of Bimetallic CuAu$_n$ (n=1-7) Nanoalloy Clusters Invoking Conceptual DFT Based Descriptors, **Applied Chemistry and Chemical Engineering**, Vol. 4, CRC & Apple Academic Press, USA, ISBN- 9781771885874.

*Conferences:*
1. Presented paper entitled "A DFT Study of Vanadium Doped Gold Nanoalloy Clusters", 7$^{th}$ International Conference on Advanced Materials and Engineering Materials (ICAMEM 2018), May 17-18, 2018, Bangkok, Thailand - Paper is published **in Key Engineering Materials, Vol-777, 183 (2018)**.
2. Presented paper entitled "Theoretical Study of Vanadium Doped Gold Nanoalloy Clusters Invoking DFT Based Descriptors", International Conference on Nanoscience and Technology, IISC Bangalore, March 21-23, 2018.
3. Presented Paper entitled "Computational Investigation of Ge Doped Au Nanoalloy Clusters", International Conference on Advances in Materials and Manufacturing Applications, Amrita University, Bangalore, July 14-16, 2016 - Paper is published in **IOP Conf. Ser.: Mater. Sci. Eng., 149, (2016) 012172**.
4. Presented Paper entitled "Computational Study of Au Doped Cu Nano Alloy Clusters", International Conference on Nanoscience and Nanotechnology for Energy Applications (EApp-2016), Sathyabama University, Chennai, June 27-29, 2016 - **Received Best Paper Award**.
5. Presented a Single Figure Presentation (SFP) "Computational Study of Bi-metallic Silver-Gold" at the Virtual Winter School on Computational Chemistry, Feb. 3-9, 2016.
6. Presented Paper entitled "Computational Study of Au$_m$Si$_n$ (m+n=2-6) Nanoalloy Clusters Invoking DFT Based Descriptors" at XXVII IUPAP Conference on Computational Physics (CCP 2015), Indian Institute of Technology, Guwahati, Dec. 2-5, 2015- Paper is published in **J. Phys. :Conf. Ser., 759 (2016) 012045**.
7. Presented Paper entitled "Computational Study of AuSi$_n$ (n=1-9) Nanoalloy Clusters Invoking DFT Based Descriptors", 2$^{nd}$ International Conference on Emerging Technologies: Micro to Nano 2015 (ETMN 2015) organized by CEERI-Pilani, BITS-Pilani and Manipal University Jaipur, Oct. 24– 25, 2015 - Paper is published in **AIP Conf. Proc., 1724 (2016) 020072.**
8. Presented Paper entitled "Electronic, Optical and Magnetic Properties of Si doped Au Nanoalloy Cluster", Virtual Conference on Computational Chemistry 2015, University of Mauritius, Mauritius, August 01-31, 2015.
9. Presented Paper entitled "Theoretical Analysis: Electronic and Optical Properties of Gold-Silicon Nanoalloy Clusters", Recent Advances in Nano Science and Technology 2015 (RAINSAT2015), Sathyabama University, Chennai, July 8– 10, 2015 - Paper is published in **Mat. Today Proc., 3 (2016) 1563**.
10. Participated in the "deMon2K and deMonNano Tutorial on DFT and DFTB methods" at French national computer IDRIS in Orsay, France, June 15– 20, 2015 - **Received Full Scholarship from University of Orsay, France.**
11. Presented Paper entitled "Computational Study of Silver-Gold Nanoalloy Clusters Invoking DFT Based Descriptors", 3$^{rd}$ Rajasthan Science Congress, Manipal University Jaipur, Feb. 28– March 2, 2015.
12. Presented Paper entitled "Computational Study of Cu$_n$Ag (n=1-8) Nanoalloy Clusters Invoking DFT Based Descriptors", International Conference on Futuristic Challenge in Computational Science and Knowledge Management, Amity University, Noida, Feb. 25 – 27, 2015.

# MANIPAL UNIVERSITY JAIPUR

*July 31, 2023*

## NOTIFICATION

It is hereby notified for the information of all concerned that the report of the Referees appointed to examine and adjudicate the Ph.D. thesis submitted by the candidate mentioned below has been accepted by this University and the candidate has been declared eligible for the award of Degree of **DOCTOR OF PHILOSOPHY (Ph.D.)** of Manipal University Jaipur.

| | |
|---|---|
| Name of the Candidate | **Mona Vajpayee** |
| Registration No. | **171016601** |
| Topic of thesis | **"STUDY OF ECO-FRIENDLY TECHNIQUES FOR SURFACE MODIFICATION OF BIOPOLYMERS TO ENHANCE ITS SELECTIVE PROPERTIES"** |
| Research Guide | **Dr. Lalita Ledwani**<br>**Professor of Chemistry**<br>**Dean, Faculty of Science**<br>**Manipal University Jaipur** |
| Research Co-Guide | **Dr. Ram Prakash**<br>**Associate Professor**<br>**Indian Institute of Technology Jodhpur** |
| Date of Defence Viva Examination | **July 31, 2023** |

**Controller of Examinations**

To,
President, MUJ
Pro President, MUJ
All Deans
All Directors
Heads of all Departments, MUJ
Registrar, MUJ
Research Guide(s)
Candidate

# APPENDIX - IV

**<SCHOOL NAME>**
**DEPARTMENT MODERATION COMMITTEE FORM**
**SEMESTER:**
**<MID-TERM/RE-SESSIONAL/END-TERM> EXAMINATION<ACADEMIC YEAR>**

**DEPARTMENT MODERATION COMMITTEE MEMBERS**
1. **HEAD OF THE DEPARTMENT**
2. **EXAM COORDINATOR('s)**
3. **PROFESSOR** **- 2**
4. **ASSOCIATE PROFESSOR** **- 1**
5. **ASSISTANT PROFESSOR** **- 1**

**MINUTES OF THE MODERATIONS COMMITTEE MEETING:**

| Course(s) for MODERATION | | | |
|---|---|---|---|
| **Sr. No.** | **Course Code** | **Course Name** | **Moderation Suggested** |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**Signature**                                                         **Signature**
**Head of the Department**                          **Director of the School**

## COURSE OUTCOMES ATTAINMENT – SUMMATIVE ASSESSMENT USING MTE QUESTIONS

| CO | CO Statement | MTE11(a) | MTE11(b) | MTE12 | MTE13 |
|----|--------------|----------|----------|-------|-------|
|    |              |          |          |       |       |
|    |              |          |          |       |       |

PAPER SETTER                MODERATOR                HoD

| CO | CO Statement | ETE11 | ETE2 | MTE3 | ETE4 | ETE5 | ETE6 |
|----|--------------|-------|------|------|------|------|------|
|    |              |       |      |      |      |      |      |
|    |              |       |      |      |      |      |      |
|    |              |       |      |      |      |      |      |
|    |              |       |      |      |      |      |      |
|    |              |       |      |      |      |      |      |
|    |              |       |      |      |      |      |      |
|    |              |       |      |      |      |      |      |

## COURSE OUTCOMES ATTAINMENT – SUMMATIVE ASSESSMENT USING END TERM QUESTIONS

PAPER SETTER                MODERATOR                HoD

MANIPAL UNIVERSITY
JAIPUR

## Question Paper Submission

Name of the School / Department :

Name of the Programme :　　　　　　　　Name of the Branch :

Semester :　　　　　　　　　　　　　　　Date of Submission :

| S. No. | Course Code | Name of the Paper | Name of the Question Paper Setter | Paper Setter Employee Code | Signature | Remark |
|--------|-------------|-------------------|-----------------------------------|----------------------------|-----------|--------|
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
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| 10 | | | | | | |
| 11 | | | | | | |
| 12 | | | | | | |
| 13 | | | | | | |
| 14 | | | | | | |
| 15 | | | | | | |

Signature :　　　　　　　　Signature :　　　　　　　　Signature :

Name :　　　　　　　　　　Name :　　　　　　　　　　Name :

Date :　　　　　　　　　　Date :　　　　　　　　　　Date :

(Department Exam Coordinator)　　(Department HOD)　　(Controller of Examination)

**\<Faculty Name\>**
**\<School Name\>**
**\<Degree Nomenclature Abbreviation\> \< Semester\>Semester**
**\<I Sessional/II Sessional/Re-sessional/End -Term\> Examination: 2018-19**
**\<Course Code \> - \<Course Name\>**
**(OPEN BOOK / CLOSED BOOK)**

**Duration: \<1/3\> Hours**                                                              **Max. Marks: --**

**Instructions:**

- Answer any five full questions
- Missing data, if any, may be assumed suitably.
- Any other instructions like calculator allowed /not allowed, Number of Books if OPEN BOOK Exam etc.

| 1. | a) | | [Marks] |
|----|----|--|---------|
|    | b) | | [Marks] |
| 2. | a) | | [Marks] |
|    | b) | | [Marks] |
| 3. | a) | | [Marks] |
|    | b) | | [Marks] |
| 4. | a) | | [Marks] |
|    | b) | | [Marks] |
| 5. | a) | | [Marks] |
|    | b) | | [Marks] |
| 6. | a) | | [Marks] |
|    | b) | | [Marks] |

**FACULTY OF ENGINEERING**
SCHOOL OF COMPUTING AND IT
B. Tech (Information Technology) – VII Semester
I Sessional Examination- 2018-19
IT 1702-Advance Data Structure
(Open Book)

**Duration: 1 hour**                                                                                    **Max. Marks: 15**

**Instructions:**
- All questions are compulsory.
- Missing data if any may be assumed suitably.
- Only two books are allowed.

1.  a)  For the set of (1; 4; 5; 10; 16; 17; 21) of keys, draw binary search trees of heights        1+1+1
        2, 3, 4, and 5

    b)  In the style of figure draw the complete binary search tree of height 3 on the keys          2+1+1
        {1, 2, ..., 15}. Add the NIL leaves and color the nodes in three different ways such
        that the black-heights of the resulting red-black trees are 2, 3, and 4



(a)
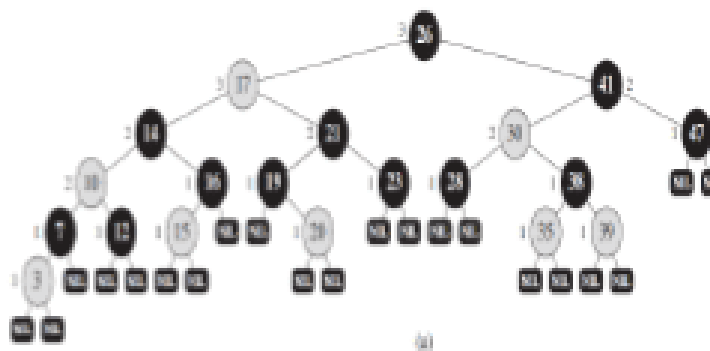
2.  a)  Perform the following sequence of operations on an initially empty binomial          1+1+1+
        heap! Draw the state of the binomial heap after each of the processes!                 1

        a) Insert (10,3 5,2, 7)
        b) decrease-key (10,1)
        c) Insert (4)
        d) delete-min (): 3 times

    b)  Construct 2-3 tree with the given nodes and also perform the given operation          2+2
        below.

        B, C, A, H, I, D, F, E

        a)  Insert (G, J)
        b)  Delete (H, F, G)

**MANIPAL UNIVERSITY JAIPUR**

| | | | | |
|---|---|---|---|---|
| | **Answer Copies Distribution** | | | |
| | **(End Semester Examination : May / July / December** | | **)** | |

**Name of the School :**

**Name of the Branch :**

**Name of the Exam Co-Ordinator :**

**Employee Code :**

**Designation :**

**Mobile No. :**

**Answer Copies Distribution Date :**

| S.No. | Name of the Semester Answer Copies Requirement | Total Requirement | No. of Bundle Required | Remark |
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| Total No. of Answer Copies Required | | | | |

Note : (1 Bundle = 250 Answer Copies)
No Loose Answer Copies will be issued

Signature                                          Signature

(Department Exam Co-Ordinator)              (HOD)

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Name of the Programme :  Name of the Branch :

Semester :  Date of Submission :

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Signature :  Signature :  Signature :

Name :  Name :  Name :

(Dept. Exam Coordinator)  (Head of Department)  (Controller of Examination)

Serial No.: 044296

# MANIPAL UNIVERSITY JAIPUR

## (Sessional Examination)

[To be filled by the Student]

Student Name : ...........................................

Registration Number : .............................................

Examination : ...........................................

Programme/ Branch/ Section : ...........................

Course Code & Name : ...............................................................................................................

Name and Signature of Invigilator (With Date) : ..........................................................................

## INSTRUCTIONS TO THE CANDIDATES

1. Make all due entries on the cover page very carefully, only at the space provided for the purpose.
2. Students should read the question paper and the instructions carefully before writing their answers.
3. Write the question number clearly in the left margin of the answer book.
4. Rough work done must be crossed out clearly and this will not be read by the examiner.
5. USE OF WASH-ROOM WILL NOT BE ALLOWED except under emergent circumstances.
6. NO SUPPLEMENTARY ANSWER-BOOKS WILL BE ISSUED. Write on both sides of the paper. Do not waste pages unnecessarily.
7. Possession of mobile phones, programmable calculators and other similar electronic gadgets is treated as malpractice. However, use of scientific calculator is permitted.
8. No paper is to be brought in the examination hall for scribbling on. Cases of students found talking, copying or using any type of unfair-means in or outside the examination rooms will be dealt with in accordance with provision of the use of unfair-means rules framed to such effect by the University.
9. Students must check their pockets, surrounding and ensure that no objectionable materials are present.
10. No student shall be allowed to enter the examination hall after 10 minutes from the commencement of examination.
11. No student shall be allowed to leave the examination hall before half an hour from the commencement of examination.
12. After finishing the exam, handover your answer book to the Room Superintendent/ Invigilator. DO NOT LEAVE IT ON THE TABLE.

### FOR THE USE OF EXAMINER

| Q. No. | a | b | c | d | Total |
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| Total Marks (in figures) | | | | | |

Marks in Words : _____

Name of Examiner :

Signature of Examiner :
(with date)

Serial No.: 376252

# MANIPAL UNIVERSITY JAIPUR

(To be filled by the Student)

Student Name : ........................................

Registration Number : ........................................

Examination : ........................................

Programme/ Branch/ Section : ........................................

Course Code & Name : ........................................................................

Name and Signature of Invigilator (With Date) : ........................................................................

## INSTRUCTIONS TO STUDENTS

1. Enter details on the cover page, only at the space provided for the purpose.

2. Read the question paper and the instructions carefully before writing answers.

3. Write the question number clearly in the left margin of the answer book.

4. USE OF WASH-ROOM WILL NOT BE ALLOWED except under emergent circumstances.

5. NO SUPPLEMENTARY ANSWER-BOOKS WILL BE ISSUED. Write on both sides of the paper. Do not waste pages unnecessarily.

6. Possession of mobile phones, programmable calculators and other similar electronic gadgets is not allowed.

7. Do not indulge in any kind of unfair means like talking, copying, exchanging material, etc., with other students.

8. Rough work done must be crossed out clearly.

9. No one will enter after 30 minutes or leave the examination hall before 45 minutes from the commencement of the examination.

10. DO NOT LEAVE THE ANSWER BOOK ON THE TABLE. Give it to the Room Superintendent/Invigilator before leaving the Examination Hall.

### FOR THE USE OF EXAMINER

| Q. No. | a | b | c | d | Total |
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| Total Marks (in figures) | | | | | |

Marks in Words : _____

Name of Examiner :

Signature of Examiner :
(with date)

# MANIPAL UNIVERSITY JAIPUR

**Examination Attendance Sheet**

Name of The Examination :

| Programme : | | | Semester : | |
|---|---|---|---|---|

Course Code & Name :

| Day of The Examination : | | | Date of The Examination : | |
|---|---|---|---|---|

| S.No. | Registration No. | Name of The Student | Answer Book Sr. Number | Student Signature |
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**Total Students :**     **Present :**     **Absent :**     **Detained :**

Signature of Room Invigilator :                    Signature of Exam Co-ordinator :

Name of Room Invigilator :                    Name of Exam Co-ordinator :

Note :

*Incase the name of students does not appear in the duly printed attendance sheet then his/her attendance may be obtained in this from after verifying his/her eligibility.

*Absent/Detained details to be filled with Red Pen.

*Over writing in the attendance sheet is not acceptable.

*Proper course code and name should be mentioned.

**MANIPAL UNIVERSITY JAIPUR**

| Remuneration Bill for Answer Copies |
|---|

| Name of the School : |
|---|

| Name of the Programme : | Name of the Branch : |
|---|---|

| Semester : |
|---|

| Course Code : | Course Name : |
|---|---|

| Total No. of Section : | Total No. of Copies (Including Make - up) : |
|---|---|

| Name of Evaluator : | Date of Exam. : |
|---|---|

Enclosure:
1. Three Copies of Question Paper ☐
2. Solution/Marking Scheme ☐
3. Marks Award Sheets (Section Wise) ☐

| S. No. | Name of Faculty | Employee Code | Section | No. of Copies Evaluated | Mobile Number | Signature |
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| **Total No. of Copies** |  |  |  |  |  |  |

Signature :          Signature :          Signature :

Name :              Name :              Name :

Date :              Date :              Date :

(Course Coordinator)    (Dept. Exam. Coordinator)    (Head of Department)

# MANIPAL UNIVERSITY JAIPUR

## REVALUATION (End Semester Examination : )

| Name of the Programme | |
|---|---|
| Name of the Branch | |
| Name of the Semester | |
| Subject Code | |
| Subject Name | |

| S. No. | Registration No. | Name of the Student | Branch | Semester | Section | Marks Before Revaluation | Marks After Revaluation | STATUS | | | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | (UC) UNCHANGED | (INC) INCREASE | (DCR) DECREASE | |
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| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |

(1) Following steps/procedure was followed during the revaluation process:

(a) Retotalling was done

(b) Scan for unchecked questions was done and if it was found uncorrected then the

(c) Best 5 questions were considered for the Total marks.

(2) I declare that I am satisfied with the revaluation process and that the same has been carried out before me.

(3) I accept the revaluation result.

(1) I have done the revaluation as per the guideline as the guidelines and to the student's satisfaction

(2) Following are my observations:

(a) No change in marks

(b) Decrease in marks due to retotalling

(c) Increase in marks due to:

• Retotalling

• Checking of unchecked answer(s)

# APPENDIX - V

MANIPAL UNIVERSITY
JAIPUR

INSPIRED BY LIFE