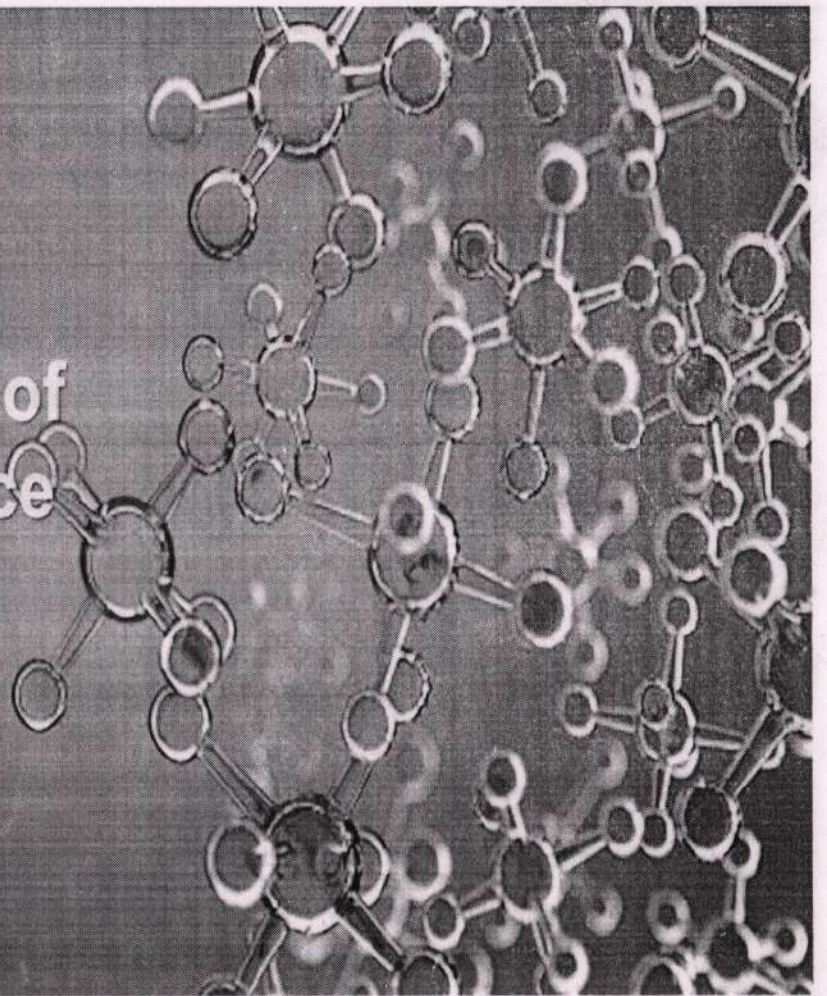


Mahatma Gandhi College
Department of Physics

Now on course

Fundamentals of Material Science



Enrollment List Of students 2022 – 23 : Fundamentals Of Material Science

Sl No:	Candidate Code	Name of the Candidate
1	23021118001	AARDRA N A
2	23021118002	ABHAY A.S
3	23021118003	ABHINAV H B
4	23021118004	ADARSH M.S
5	23021118005	AKHIL PRADEEP P B,
6	23021118006	AMAL KISHORE P
7	23021118007	AMBADI SURESH S S
8	23021118008	ANAND S
9	23021118009	ARCHA M.S
10	23021118010	ARYA R L
11	23021118011	ASWIN A S
12	23021118012	AVANTHIKA RAJESH
13	23021118013	BHAGATH A .R
14	23021118014	GADHA M LEKSHMY
15	23021118015	GOURI. R
16	23021118016	JISHA. L
17	23021118017	KANCHANAKRISHNA N
18	23021118018	MEENAKSHI A M
19	23021118019	PARTHAN.A.S
20	23021118020	PARVATHY PRATHAP
21	23021118021	REMYA CHANDRAN R
22	23021118022	SAJIN R
23	23021118023	SIDHARTH J
24	23021118024	SNEHA A
25	23021118025	SREELEKSHMI B
26	23021118026	A ASWAL
27	23021118027	ABHINAV.V.S
28	23021118028	ABIN .A.S.
29	23021118029	ADITHYA RAJU
30	23021118030	AKASH S K
31	23021118031	AKSHAY JOSHUA
32	23021118035	ARJUN DEV. G
33	23021118036	ASWIN DAS S G
34	23021118037	ASWIN S M
35	23021118038	GAUTHAM S NAIR
36	23021118039	GOKUL B S
37	23021118040	GOPIKA L

38	23021118041	KARTHIKA .B.A
39	23021118042	KRISHNAJA. M
40	23021118043	MEGHNA PRAMOD
41	23021118044	NIVEDA N V
42	23021118045	SNEHA S
43	23021118046	SRAVAN S P
44	23021118047	SRUTHI .S
45	23021118048	VISHNU B A
46	23021118049	ATHUL VIJAY V S
47	23021118050	BEENA.P
48	23021118051	MEKHA .U
49	23021118052	RIJU. B.
50	23021118053	SAJITH.S
51	23021118054	VISHNU S
52	23022118001	ABHAI SHAJ S
53	23022118002	ABHIJITH K
54	23022118003	ABHINAV KRISHNA K
55	23022118004	ADARSH A M
56	23022118005	ADITHYAN A
57	23022118008	AKSHAY K
58	23022118009	ANMI ANIL
59	23022118010	APARNA R
60	23022118011	ARJUN K RAMESH
61	23022118012	ARYA A D
62	23022118013	ASWIN S NAIR
63	23022118014	AVANEESH V M
64	23022118015	DEVIKA B S
65	23022118016	DEVIKA S NAIR
66	23022118017	GAYATHRI S V
67	23022118018	GOURI KRISHNA D S
68	23022118019	GOWREESH S NAIR
69	23022118020	MEENU B
70	23022118021	NANDANA S S
71	23022118022	RAMPRAKASH P L
72	23022118023	SURYA S
73	23022118024	VISHNU S
74	23022118025	ABHIJITH S
75	23022118026	ABJIJITH B S
76	23022118027	ABHIJITH S A
77	23022118028	ABHMANYU S
78	23022118029	ABHINAND A S
79	23022118030	ABHISHEK S DEV
80	23022118031	ADITHYA V R

81	23022118032	AJIN B
82	23022118034	APARNA KRISHNAN
83	23022118035	ARATHY P J
84	23022118036	ARATHY S V
85	23022118037	ARCHANA S
86	23022118041	ATHULYA J A
87	23022118042	BHAVYA R V
88	23022118043	GANGA S
89	23022118044	JITHIN R
90	23022118045	JYOTHIS BABU
91	23022118046	KIRAN A J
92	23022118047	MALAVIKA B S
93	23022118048	MANUKRISHNA M
94	23022118049	NAKUL M
95	23022118050	PAVITHRA A S

"Fundamentals of Material Science"

Syllabus

Course duration 30 hours

Unit 1

Structure of materials, Crystal structure of materials. Application of diffusion insintering, Metals and alloys, Metal alloy processing and classification, ceramic structure, properties, and processing , Polymers and composites. polymer processing and applications; corrosion degradation mechanisms, electrochemical reactions, and protection methods.

Unit 2

Electrical properties of metals, semiconductors, and dielectrics; thermal properties of metals and non-metals; magnetic material fundamentals, properties and applications; optical material fundamentals, properties and applications. Composite material principles.

Unit 3

Advanced tools and materials, Mechanical properties of solids. Introduction to dislocations, grain boundaries, surfaces and multiphase microstructures. Optical and electron microscopic characterization of microstructures.

78	23022118029	ABHINAND A S											
79	23022118030	ABHISHEK S DEV											
80	23022118031	ADITHIYA V R						a					
81	23022118032	AJIN B											
82	23022118034	APARNA KRISHNAN			a								
83	23022118035	ARATHY P J											
84	23022118036	ARATHY S V						a					
85	23022118037	ARCHANA S											
86	23022118041	ATHULYA J A						a					
87	23022118042	BHAVYA R V							a				
88	23022118043	GANGA S			a								
89	23022118044	JITHIN R						a					
90	23022118045	JYOTHIS BABU			a								
91	23022118046	KIRAN A J											
92	23022118047	MALAVIKA B S									a	a	
93	23022118048	MANUKRISHNA M											
94	23022118049	NAKUL M											
95	23022118050	PAVITHRA A S	a	a									

Pad
HOD

Test paper

- In terms of which of the following properties, metals are better than ceramics?
 - Hardness
 - Ductility
 - Toughness
 - Yield Strength
- Ceramics make excellent refractory materials. A material is said to be refractory if it:
 - resists the flow of electric current
 - has high refractive index
 - retains its strength at high temperatures
 - all of the mentioned
- Packing efficiency of a crystal structure is the ratio of:
 - Volume occupied by particles to the total volume of the unit cell
 - Volume occupied by particles to that by voids
 - Total volume of the unit cell to the volume occupied by particles
 - Volume occupied by voids to that by particles
- An octahedral void is surrounded by:
 - 8 atoms
 - 18 atoms
 - 6 atoms
 - 16 atoms
- X-rays have larger wavelengths than which of the following?
 - Gamma rays
 - Beta rays
 - Microwave
 - Visible light
- Minimum interplanar spacing required for Bragg's diffraction is:
 - $\lambda/4$
 - $\lambda/2$
 - λ
 - 2λ
- Frenkel defect belongs to which of the following classes?
 - Point defect
 - Linear dislocation
 - Interfacial defect
 - Bulk defect
- Ferromagnetic material shows strong para-magnetic behaviour due to the formation of domains. These domains belong to:
 - Point defects
 - Linear defects
 - Interfacial defects
 - Bulk defects
- What is the unit for stress?
 - N/m^2
 - Nm^2
 - N/m
 - Nm
- Which of the following relation is stated by Hooke's law?
 - Stress is directly proportional to strain
 - Stress is inversely proportional to strain
 - Stress is directly proportional to square of strain
 - Stress is inversely proportional to square of strain

Test paper Marks

Sl No:	Candidate Code	Name of the Candidate	20
1	23021118001	AARDRA N A	18
2	23021118002	ABHAY A.S	17
3	23021118003	ABHINAV H B	17
4	23021118004	ADARSH M.S	16
5	23021118005	AKHIL PRADEEP P B	19
6	23021118006	AMAL KISHORE P	19
7	23021118007	AMBADI SURESH S S	18
8	23021118008	ANAND S	18
9	23021118009	ARCHA M.S	17
10	23021118010	ARYA R L	16
11	23021118011	ASWIN A S	20
12	23021118012	AVANTHIKA RAJESH	20
13	23021118013	BHAGATH A .R	20
14	23021118014	GADHA M LEKSHMY	18
15	23021118015	GOURI. R	18
16	23021118016	JISHA. L	16
17	23021118017	KANCHANAKRISHNAN	14
18	23021118018	MEENAKSHI A M	17
19	23021118019	PARTHAN.A.S	17
20	23021118020	PARVATHY PRATHAP	18
21	23021118021	REMYA CHANDRAN R	19
22	23021118022	SAJIN R	18
23	23021118023	SIDHARTH J	17
24	23021118024	SNEHA A	17
25	23021118025	SREELEKSHMI B	18
26	23021118026	A ASWAL	15
27	23021118027	ABHINAV.V.S	19
28	23021118028	ABIN .A.S.	20
29	23021118029	ADITHYA RAJU	20
30	23021118030	AKASH S K	18
31	23021118031	AKSHAY JOSHUA	15
32	23021118035	ARJUN DEV. G	16
33	23021118036	ASWIN DAS S G	18
34	23021118037	ASWIN S M	16
35	23021118038	GAUTHAM S NAIR	18
36	23021118039	GOKUL B S	17
37	23021118040	GOPIKA L	17

Handwritten signatures and marks in blue ink:
 Aardra
 Abhay
 Abhinav
 Adarsh
 Akhil
 Amal Kishore
 Ambadi
 Anand
 Archa
 Arya
 Aswin
 Avanthika
 Bhagath
 Gadha Lekshmy
 Gouri
 Jisha
 Kanchana
 Meena
 Parthan
 Parvathy
 Remya
 Sajin
 Sidharth
 Sneha
 Sreelekshmi
 Aswal
 Abhinav
 Abin
 Adithya
 Akash
 Akshay
 Arjun
 Aswin
 Aswin
 Gautham
 Gokul
 Gopika

38	23021118041	KARTHIKA .B.A	18
39	23021118042	KRISHNAJA. M	19
40	23021118043	MEGHNA PRAMOD	19
41	23021118044	NIVEDA N V	18
42	23021118045	SNEHA S	17
43	23021118046	SRAVAN S P	17
44	23021118047	SRUTHI .S	18
45	23021118048	VISHNU B A	16
46	23021118049	ATHUL VIJAY V S	16
47	23021118050	BEENA.P	19
48	23021118051	MEKHA .U	19
49	23021118052	RIJU. B.	20
50	23021118053	SAJITH.S	20
51	23021118054	VISHNU S	20
52	23022118001	ABHAI SHAJ S	18
53	23022118002	ABHIJITH K	19
54	23022118003	ABHINAV KRISHNA K	17
55	23022118004	ADARSH A M	16
56	23022118005	ADITHYAN A	15
57	23022118008	AKSHAY K	14
58	23022118009	ANMI ANIL	15
59	23022118010	APARNA R	15
60	23022118011	ARJUN K RAMESH	16
61	23022118012	ARYA A D	17
62	23022118013	ASWIN S NAIR	17
63	23022118014	AVANEESH V M	18
64	23022118015	DEVIKA B S	18
65	23022118016	DEVIKA S NAIR	18
66	23022118017	GAYATHRI S V	18
67	23022118018	GOURI KRISHNA D S	19
68	23022118019	GOWREESH S NAIR	19
69	23022118020	MEENU B	19
70	23022118021	NANDANA S S	17
71	23022118022	RAMPRAKASH P L	17
72	23022118023	SURYA S	16
73	23022118024	VISHNU S	16
74	23022118025	ABHIJITH S	18
75	23022118026	ABJIJITH B S	18
76	23022118027	ABHIJITH S A	19
77	23022118028	ABHMANYU S	19
78	23022118029	ABHINAND A S	18
79	23022118030	ABHISHEK S DEV	18
80	23022118031	ADITHYA V R	19

Karthika
Krishnaja
Meghna
Niveda
Sneha
Sraavan P
Sruthi
Vishnu B A
Athul Vijay
Beena P
Mekha
Riju
Sajith
Vishnu S
Abhai Shaj S
AbhiJith K
Abhinav Krishna K
Adarsh A M
Adithyan A
Akshay K
Anmi Anil
Aparna R
Arjun K Ramesh
Arya A D
Aswin S Nair
Avaneesh V M
Devika B S
Devika S Nair
Gayathri S V
Gouri Krishna D S
Gowreesh S Nair
Meenu B
Nandana S S
Rampakash P L
Surya S
Vishnu S
AbhiJith S
AbjiJith B S
AbhiJith S A
Abhmanyu S
Abhinand A S
Abhishek S Dev
Adithya V R

Feedback Analysis

Sl No	Candidate Code	Name of the Candidate	Excellent	Very good	Good	Satisfactory	Poor
1	23021118001	AARDRA N A	✓				
2	23021118002	ABHAY A.S	✓				
3	23021118003	ABHINAV H B		✓			
4	23021118004	ADARSH M.S		✓			
5	23021118005	AKHIL PRADEEP P B	✓				
6	23021118006	AMAL KISHORE P		✓			
7	23021118007	AMBADI SURESH S S	✓				
8	23021118008	ANAND S		✓			
9	23021118009	ARCHA M.S	✓				
10	23021118010	ARYA R L		✓			
11	23021118011	ASWIN A S		✓			
12	23021118012	AVANTHIKA RAJESH	✓				
13	23021118013	BHAGATH A .R		✓			
14	23021118014	GADHA M LEKSHMY		✓			
15	23021118015	GOURI. R	✓				
16	23021118016	JISHA. L		✓			
17	23021118017	KANCHANAKRISHN AN		✓			
18	23021118018	MEENAKSHI A M		✓			
19	23021118019	PARTHAN.A.S		✓			
20	23021118020	PARVATHY PRATHAP		✓			
21	23021118021	REMYA CHANDRAN			✓		
22	23021118022	SAJIN R		✓			
23	23021118023	SIDHARTH J	✓				
24	23021118024	SNEHA A	✓				
25	23021118025	SREELEKSHMI B	✓				
26	23021118026	A ASWAL		✓			
27	23021118027	ABHINAV.V.S		✓			
28	23021118028	ABIN .A.S.		✓			
29	23021118029	ADITHYA RAJU		✓			
30	23021118030	AKASH S K	✓				
31	23021118031	AKSHAY JOSHUA	✓				
32	23021118035	ARJUN DEV. G			✓		
33	23021118036	ASWIN DAS S G			✓		

34	23021118037	ASWIN S M			✓	
35	23021118038	GAUTHAM S NAIR		✓		
36	23021118039	GOKUL B S	✓			
37	23021118040	GOPIKA L	✓			
38	23021118041	KARTHIKA .B.A	✓			
39	23021118042	KRISHNAJA. M	✓			
40	23021118043	MEGHNA PRAMOD	✓			
41	23021118044	NIVEDA N V	✓			
42	23021118045	SNEHA S		✓		
43	23021118046	SRAVAN S P		✓		
44	23021118047	SRUTHI .S		✓		
45	23021118048	VISHNU B A		✓		
46	23021118049	ATHUL VIJAY V S		✓		
47	23021118050	BEENA.P	✓			
48	23021118051	MEKHA .U	✓		✓	
49	23021118052	RIJU. B.			✓	
50	23021118053	SAJITH.S			✓	
51	23021118054	VISHNU S	✓			
52	23022118001	ABHAI SHAJ S		✓		
53	23022118002	ABHIJITH K			✓	
54	23022118003	ABHINAV KRISHNA		✓		
55	23022118004	ADARSH A M	✓			
56	23022118005	ADITHYAN A		✓		
57	23022118008	AKSHAY K			✓	
58	23022118009	ANMI ANIL		✓		
59	23022118010	APARNA R		✓		
60	23022118011	ARJUN K RAMESH			✓	
61	23022118012	ARYA A D			✓	
62	23022118013	ASWIN S NAIR		✓		
63	23022118014	AVANEESH V M	✓			
64	23022118015	DEVIKA B S	✓			
65	23022118016	DEVIKA S NAIR		✓		
66	23022118017	GAYATHRI S V		✓		
67	23022118018	GOURI KRISHNA D S	✓			
68	23022118019	GOWREESH S NAIR			✓	
69	23022118020	MEENU B			✓	
70	23022118021	NANDANA S S			✓	
71	23022118022	RAMPRAKASH P L		✓		
72	23022118023	SURYA S	✓			
73	23022118024	VISHNU S			✓	
74	23022118025	ABHIJITH S	✓			
75	23022118026	ABJIJITH B S			✓	
76	23022118027	ABHIJITH S A		✓		

77	23022118028	ABHMANYU S	✓				
78	23022118029	ABHINAND A S				✓	
79	23022118030	ABHISHEK S DEV	✓				
80	23022118031	ADITHYA V R	✓				
81	23022118032	AJIN B		✓			
82	23022118034	APARNA KRISHNAN		✓			
83	23022118035	ARATHY P J		✓			
84	23022118036	ARATHY S V			✓		
85	23022118037	ARCHANA S		✓			
86	23022118041	ATHULYA J A	✓				
87	23022118042	BHAVYA R V			✓		
88	23022118043	GANGA S			✓		
89	23022118044	JITHIN R		✓			
90	23022118045	JYOTHIS BABU	✓				
91	23022118046	KIRAN A J			✓		
92	23022118047	MALAVIKA B S			✓		
93	23022118048	MANUKRISHNA M		✓			
94	23022118049	NAKUL M	✓				
95	23022118050	PAVITHRA A S	✓				

DEPARTMENT OF PHYSICS
MAHATMA GANDHI COLLEGE, THIRUVANANTHAPURAM

CERTIFICATE

It is certified that Mr./Ms. *Jithin R* has participated
in the Add-on course **Fundamentals of Materials Science** conducted by this department
during 2022-2023.


Coordinator


Head of the Department


Principal

Report

The course was conducted for 95 students. Students will get to know the different classes of materials used in engineering applications and would be able to choose the right materials for specific applications. This course gave an idea on the fundamental aspects of materials science which every material scientist is supposed to be familiar with like the basic structure of solids, classification of materials based on the structure and the correlation between the structure and properties. Students were satisfied with the course.

