

THE INDIAN INSTITUTE OF METALS

ASSOCIATE MEMBERSHIP EXAMINATION

GENERAL INFORMATION

Since the inception of the Indian Institute of Metals, the Professional Society of the Metallurgical Engineers, it has under its consideration, the holding of qualifying professional examination having the same standard as that of a Bachelor degree in Metallurgical Engineering from a recognised Indian or foreign University. For admission to the Membership of the Institute, the aim was to assist persons engaged in industries, teaching and research who might not have had the opportunity for a formal university education, to qualify themselves by personal efforts to attain the same educational standard as graduates in Metallurgical Engineering. A committee comprising educationists and professional metallurgists formulated the syllabus and rules for such an examination, which would qualify the successful candidates to become associate members of the Institute. The first examination was held in 1962 at four Centres in the country. Since then, due to considerable increase in the number of candidates desirous of appearing at the examination, it has become necessary to increase the number of Centres and also to hold the examinations twice a year, i.e. in June and in December.

The syllabus of the Institute examination has been approved by the Ministry of Education, Government of India and those qualifying are recognized by the Union Public Service Commission, the Government of India as having the same academic qualification as a graduate in Metallurgical Engineering.

The examinations are conducted by a special Board nominated by the Council and are being held in various cities of the country. It is proposed to conduct the examinations in future at each place where an active Chapter of the Institute functions. The syllabus, question papers and the application forms for the Institute examinations are available from the Institute office on payment of appropriate charges as detailed below:

A. General Rules and Syllabus		Rs. 100/- each
B. Syllabus, Examination Application Form and registration for first time candidates		Rs. 150/-each set
C. Old Question Papers :	Part-I	Rs. 200/- each set for one year
	Part-II	Rs. 200/- each set for one year (Add Rs. 50/- extra for courier charge)
Bound Volume:	Part-I	Rs. 500/- each set for 5 years
	Part-II	Rs. 500/- each set for 5 years (Add Rs. 150/- extra for courier charge)

All types of fees/charges are to be paid in the form of an a/c payee Demand Draft payable on any Bank drawn in favour of **The Indian Institute of Metals**, Kolkata. Cash may also be accepted in case of exigency.

The examinations are normally being held at the following Centres for the last couple of years subject to the enrolment of a minimum number of candidates for a particular Centre:

B E College	Delhi	Nagpur	Vijaynagar
Bangalore	Durgapur	Poona	Visakhapatnam
Baroda	Hyderabad	Raigarh	
Bhilai	Ichapur	Rourkela	
Burnpur	Jamshedpur	Salem	
Chennai	Mumbai	Sunabeda	

Addition or deletion of Centres are decided by the Council from time to time and the changes are announced through IIM Metal News.

No request for a change in Centre shall be entertained after the last date of receipt of the filled up examination form either for the June or the December examination.

Request for re-totalling of Grade in answer scripts will be entertained within one month from the date of publication of the results. No request for re-totalling of previous examinations other than the immediate past examination will be entertained. No **request for re-examination of Answer Scripts shall be entertained**. Re-totalling charge for one answer script is Rs.200/- only plus Rs 50 courier charge.

Part-I examination will consist of the subjects whose details are given in the subsequent pages. The Syllabus covering each subject has been so designed as to enable the students to acquire a minimum knowledge of the basic science, required for the understanding of metallurgical engineering subjects.

ELIGIBILITY CRITERIA (effective from January 2005)

Eligibility for admission as a Member, for appearing at the AMIIM Examinations:

A candidate with minimum 2 (two) years of industrial experience after passing the qualifying examination 10+2 (Higher Secondary or equivalent examination with Physics, Chemistry and Mathematics)

OR

Passed B Sc with any subject combination after passing 10+2 (Higher Secondary or equivalent examination with Physics, Chemistry and Mathematics. The candidate should also preferably be employed in a Metallurgical Concern.

OR

A diploma holder in any engineering/technical stream (of three year duration and recognized by AICTE/State Board of Technical Education/any competent Authority) after passing 10+2 or SSLC with Physics, Chemistry and Mathematics as principal subjects. The Diploma holders with SSLC background should have at least 1 (one) year of industrial experience after passing Diploma Examination.

Application for registration with IIM as a Member shall only be entertained after he/she has acquired the required eligibility as mentioned above.

EXAMINATION REGULATIONS

1. No candidate shall be allowed to appear at the immediately available Examination after enrolment as a Member. However, a Member must appear at the AMIIM Examination within 18 (eighteen) months from the date of enrolment as a Member, subject to fulfillment of other eligibility criteria, failing which his/her Membership shall be terminated.

2. A candidate with B.Sc/Diploma background must complete the Part-I Course within 3 (three) years (maximum 6 chances) and others in 4 (four) years (maximum 8 chances) from the date of his/her 1st appearance at the Part-I Examination.
3. AMIIM Part-I pass candidates will not be allowed to appear at the succeeding Part-II examination, [i.e., there should be a gap of at least 6 (six) months between Part-I and Part-II].
4. **No candidate will be permitted to appear in more than 5 (five) subjects at a time in Part-I and Part-II AMIIM Examinations.** However, a Part-II candidate will get a total of 8 (eight) chances to clear the Part-II Examination.
5. Nonappearance in any scheduled examination of IIM will be considered as chance missed, for any reason whatsoever.

EXEMPTION IN DIFFERENT SUBJECTS

Exemption in one or more number of subject (s) in Part-I may be granted on receipt of request from a candidate with different background as per the details given below:

1. **Candidates with B.Sc background** : Will be entitled for exemption in the papers on Physics, Chemistry & Mathematics, provided that a candidate has secured a minimum of 40% marks in each of the above subjects in the final University examination.
2. **Candidates with Diploma in Engineering** : Will be entitled for exemption in the papers on Physics, Chemistry, Mathematics and Engineering Drawing, provided that a candidate has secured a minimum of 40% marks in each of the above subjects in the Diploma examination.

Note:

1. Candidate with Diploma in Metallurgical Engineering will also be entitled for exemption in the paper on Basic Metallurgy.
2. Exemption in different subjects for all such candidates as mentioned above will be given by a Competent Committee on the basis of scrutiny of the mark sheets and certified copies of course contents of the concerned subjects, based on which exemption is being sought.
3. Graduates or its equivalent qualification in any branch of Engineering (except Met. Engg/Met. & Mat. Engg.) may be granted exemption in one or more subjects from the prescribed courses of Part-I AMIIM Examination only on verification of the prescribed syllabus for each of the individual subject(s) for which exemption has been prayed, and other related documents of the respective branch of engineering degree.
4. Candidates who have secured Grade - D in any paper(s) of the AMIIM Examinations are exempted in that/those paper(s) in subsequent attempts.

APPLICATION FOR AMIIM EXAMINATION

Candidates shall submit their applications in prescribed form so as to reach the Institute Office within the specified date, i.e. for the June examinations, the application should reach the Institute Head Office on or before 31st May and for the December examinations, on or before 30th November. Each application form shall be accompanied with nonrefundable fees and two copies of recent passport size photographs (duly attested either by an IIM Member or the candidate's Employer) together with documentary proof of his/her academic qualifications, and mark sheets.

From the Academic Year 2006, the Indian Institute of Metals is going to adopt the Grading System instead of Absolute Marking System in the Evaluation Process. A Student's Performance would be judged on a 6 (six) Point Scale Grading System as per the following :

Performance	Letter Grade	Grade Point
Excellent	Ex	10
Very Good	A	9
Good	B	8
Fair	C	7
Average	D	6
Fail	F	0

- I. The revised Grading System would be based on the following guideline for conversion of Absolute Scored Marks into Letter Grades :

Marks scored greater than or equal to **75 - Ex Grade** (Grade Points 10)

Marks Scored **65 to 74 : A Grade** (Grade Points 9)

Marks Scored **55 to 64 : B Grade** (Grade Points 8)

Marks Scored **45 to 54 : C Grade** (Grade Points 7)

Marks Scored **35 to 44 : D Grade** (Grade Points 6)

Marks Scored less than **35: F Grade** (Grade Point 0, i.e. Fail)

VIVA - VOCE Examination : Minimum pass marks = **45 i.e. Grade "C"**

Project and Report = Minimum **Grade "C"**, to complete the Project successfully.

- II. The candidate should obtain at least **Grade D** or higher in each Theory Paper to be declared "**Passed**".
- III. A candidate to be declared "**Passed**" should also obtain for the final diploma a overall minimum grade point average (**GPA**) = **7.0** in **Part-I and Part-II** Examinations separately, failing which he/she may reappear in subject/subjects of his/her choice for improvement of his/her overall Grade.
- IV. The overall Grade Point Average (**GPA**) in Part-I/Part-II Examinations is to be evaluated separately only when a candidate has secured at least the minimum Grade for passing in each subject and cleared all the subjects of either Part-I or Part-II and the GPA to be estimated as :

$$\frac{\text{Total Grade point Scored}}{\text{No. of subjects passed}}$$

- V. No reappearance in improving the Grade in a subject/subjects to be allowed if the candidate has already scored **GPA > 7.0** in either Part -I or Part - II Examinations.
- VI. For the candidates who have passed Part-II AMIM Examination and still wish to appear in some additional paper/s for specialization, the candidate should obtain at least **Grade C** for such additional paper (s) and they will be provided a separate Grade Sheet of the same. Grade obtained in that subject (s) will not be included for assessment of results.
- VII. Charges for re-totalling of the assessed Answer Scripts is Rs. 200/- per script plus Rs. 50/- for Courier charge and the charges for issuance of the Official Transcript is Rs 1000/- per set of 1 (one) copy plus Rs. 50/- for courier charge and extra Rs 500/- for second copy. Charges for Duplicate AMIIM Certificate is Rs 1000/- Plus Rs 50/- courier charge. Charges for Consolidated grade sheet is Rs 200/- for each part plus

Rs 50/- courier charge. Charges for Percentage certificate is Rs 200/- plus Rs 50/- courier charge.

EXAMINATION FEES :

Applications for the Institute Examination must accompany the following requisite Examination Fees:

	Part-I	Part - II
Examination Fees/attempt	Rs.2000/-	Rs.2000/-
	(including cost of the Form)	

Examination Fees once paid are normally not refunded or transferred to subsequent examinations.

Subjects for PART - I Examination

For Ordinary Non-Graduates

English for Technical Communication (101)	100 marks
Mathematics (102)	100 marks
Chemistry (103)	100 marks
Physics (104)	100 marks
Basic Metallurgy (105)	100 marks
Engineering Drawing and Graphics+ (106)	100 marks
Mechanics of Solids and Fluids (107).....	100 marks
Electrical Technology and Basic Electronics (108).....	100 marks
Metallurgical Thermodynamics & Kinetics (109)	100 marks

For Science Graduates (with Physics, Chemistry & Mathematics)

English for Technical Communication (101).....	100 marks
Mathematics* (102)	100 marks
Chemistry *(103)	100 marks
Physics *(104)	100 marks
Basic Metallurgy (105).....	100 marks
Engineering Drawing and Graphics + (106).....	100 marks
Mechanics of Solids and Fluids (107).....	100 marks
Electrical Technology and Basic Electronics (108).....	100 marks
Metallurgical Thermodynamics & Kinetics (109)	100 marks

For Diploma Holders in any branch of Engineering

(other than Metallurgical Engineering)

English for Technical Communication (101)	100 marks
Mathematics* (102)	100 marks
Chemistry* (103)	100 marks
Physics* (104)	100 marks
Basic Metallurgy (105)	100 marks
Engineering Drawing and Graphics *+ (106)	100 marks
Mechanics of Solids and Fluids (107)	100 marks
Electrical Technology and Basic Electronics (108)	100 marks
Metallurgical Thermodynamics & Kinetics (109)	100 marks

For Diploma Holders in Metallurgical Engineering

English for Technical Communication (101)	100 marks
Mathematics* (102)	100 marks
Chemistry* (103)	100 marks
Physics* (104)	100 marks
Engineering Drawing and Graphics *+ (106)	100 marks
Mechanics of Solids and Fluids (107)	100 marks
Electrical Technology and Basic Electronics (108)	100 marks
Metallurgical Thermodynamics & Kinetics (109)	100 marks

*Exemption may be allowed in case a candidate who passed each of the above subjects in his/her final University/Diploma Examination.

+ 4 (four) hour duration.

Remaining papers of both Part-I and Part-II are of 3 (three) hour duration.

For Part-II Examination a candidate is required to clear 10 (ten) papers (8 compulsory and 2 elective papers) of 100 marks each as given below. The standard of the question papers will generally be that of Bachelor Degree Examination in Metallurgical Engineering.

Compulsory subjects of PART - II Examination

1. Iron Making (201).....	100 marks
2. Steel Making (202).....	100 marks
3. Extractive Metallurgy of Non-Ferrous Metals (203).....	100 marks
4. Phase Equilibrium and Phase Transformation (204).....	100 marks
5. Heat Treatment Technology (205).....	100 marks
6. Deformation and Fracture Behaviour of Metals and Alloys (206).....	100 marks
7. Mechanical Working and Testing of Metals and Alloys (207).....	100 marks
8. Materials Processing	100 marks

Elective Papers of Part - II Examination

Each candidate will have to choose any two subjects as his/her elective papers by selecting not more than one subject from any of the 7 (seven) Groups listed below. Full marks for each subject would be 100.

Group - A

1. Corrosion and Corrosion Prevention (EO5).
2. Computer Applications in Metallurgy (EO8).

Group - B

1. Industrial Management (E09).
2. Energy Management in Metallurgical Industries (E07).

Group - C

1. NDT of Metals and Alloys (E04).
2. Industrial Pollution and Pollution Control (E06).

Group - D

1. Mineral Beneficiation and Agglomeration (E11).
2. Nuclear Materials (E12).

Group - E

1. Selection and Application of Materials (E02).
2. Materials Characterization (will be effective from June 2017 AMIIM Exams)

Group - F

1. Polymeric, Ceramic and Electronic Materials (E10).
2. Secondary Steel Making & Casting Processes. (will be effective from June 2017 AMIIM Exams)

Group-G

1. Fuels, Furnaces and Refractories (E14).
2. Composite Materials (E13).

VIVA-VOCE & REPORT WRITING

A candidate who would qualify in all the subjects as well as in the aggregate for both Part-I & Part-II of AMIIM examinations, will have to appear for a Viva-Voce Examination on Compulsory Papers of Part-II. In addition, he/she will have to submit a detailed report on work experience/project work carried out by him/her as per the Format given below. The full marks for Viva-Voce examination will be 100. Marks / Grade secured in the Viva-Voce examination will not be considered for computation of total marks/GPA. The Technical Report submitted by

the candidate will be examined either by the Controller of Examinations or any of his nominees. The examiner will grade the report either as satisfactory or unsatisfactory. Obtaining a satisfactory grade will be the qualifying requirement.

FORMAT FOR SUBMISSION OF PROJECT REPORT

Cover page	:	Printed
Certificate	:	By the Guide or Chapter Secretary
Acknowledgment		
Contents		
List of Figures		
List of Tables		
Abstract/Synopsis	=	Short resume of total activity.
Chapter-1	:	Introduction
Chapter - 2	:	Literature Survey with aim or objective
Chapter-3	:	Experimental details / Methodology
Chapter-4	:	Results & Discussions
Chapter-5	:	Conclusions
Chapter-6	:	Scope of future study
List of References.		

MISC. ITEMS

Notwithstanding any rules prescribed herein, the Council of the Institute will have the right to refuse or grant exemption from Part-I or Part-II of the Examinations or refuse to accept any candidate for the Examination or to change the syllabus of the subjects of the Examinations, Centres of the Examination or any rules and regulations regarding Examinations, at its entire discretion.

*Retotalling of answer scripts	200/- per script
*Consolidated Grade Sheet part I or part II	200/-for either (either for Pt I or Pt II)
*Official Final Grade Sheet (Part I & Part II together)	1000/- per copy and extra 500/- for second copy
*Duplicate AMIIM Certificate	1000/-
*Percentage Certificate Part I or Part II	200/-for either Part I or Part II

- Plus Rs 50/- for postage

Rules to be observed by the candidates in the Examination Hall:

- 1 Before entering the examination Hall, candidates must leave outside all books, notes or papers he/she may have with him/her.
- 2 Candidates should occupy their seats at least five minutes before the start of examination. Question papers and Answer Scripts to be distributed within five minutes of the scheduled time.
- 3 In case a candidate comes late (by not more than thirty minutes) he/she has to take permission of the Officer-in-Charge. If the period of late is more than thirty minutes, he/she may not be allowed to take the examination for that particular subject.
- 4 The name of the candidate must not appear anywhere in the Answer Script.
- 5 Candidates are required to answer in English only.
- 6 Each answer should be numbered so as to correspond to the number of question and if any question is divided into parts, each part should also be numbered.
- 7 The handwriting should be clear and legible. Marks may be deducted, if the answers are not legible.
- 8 Candidates shall not leave the Examination Hall before one hour from the commencement of the examination.
- 9 Candidates must submit their answer scripts to the Invigilator before leaving the Hall.
- 10 Candidates must not speak with each other during examination. However, if required, Invigilator's attention may be drawn by raising hand.
- 11 Any candidate found helping another candidate or attempting to obtain unfair assistance or using unfair means is liable to be expelled from the Examination Hall. Controller of Examinations reserves the right to take suitable action as may be deemed proper, such as cancellation of paper(s), debarring him/her from appearing at one or more subsequent Institute Examinations, cancelling his/her primary membership depending on the nature of the offence committed.
- 12 Candidate should bring with them their Admit Cards to the Examination Hall every day and should present the same to the Invigilator/Officer-in-Charge as and when demanded by them.