

## **MERCHANT SHIPPING (EXAMINATION OF ENGINEERS IN THE MERCHANT) NAVY RULES, 1963**

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## **MERCHANT SHIPPING (EXAMINATION OF ENGINEERS IN THE MERCHANT) NAVY RULES, 1963**

<sup>1</sup>1. Published in the Gazette of India, 1963, Pt. II, Sec. 3 (i), p. 1156. In exercise of the powers conferred by Cls. (a), (b), (c) and (d) of Sec. 87 read with Sec. 83 of the Merchant Shipping Act, 1958 (44 of 1958), and in supersession of all previous rules and orders on the subject, the Central Government hereby makes the following rules, namely

### **1. Short title and commencement :-**

(1) These rules may be called the Merchant Shipping (Examination of Engineers in the Merchant Navy) Rules, 1963.<sup>1</sup>

(2) They shall come into force on the 1st day of January, 1965.]

1. Subs. by S.O. 3497, dated 21st September, 1964.

## **2. Definitions :-**

In these rules, unless the context otherwise requires

(a) "Act" means the Merchant Shipping Act, 1958 (44 of 1958);

(b) "Examiner" and "Chief Examiner" mean the persons specified in Appendix 'A'.

## **3. Certificates of Competency :-**

The Certificates of Competency may be either First or Second Class and in each class, the Certificates may be granted as follows:

(i) Steam Certificates entitling the holders to serve as engineers in the grade certified in steamships,

(ii) Motor Certificates entitling the holders to serve as engineers in the grade certified in motor ships, i.e., ships propelled by diesel (internal combustion) engines,

(iii) Combined Steam and Motor Certificates entitling the holders to serve as engineers in the grade certified in both steam and motor ships.

## **4. Endorsement of Certificates :-**

Holders of First or Second Class Certificates, Steam or Motor, will, after serving the necessary period of qualifying sea time in the other type of ship and passing the endorsement examination in the same class as for the certificate which they hold, be furnished with a combined Steam and Motor Certificate, entitling them to serve in either type of ship. Candidate holding a First Class Certificate who have passed the Second Class Examination only for the other type of ship will have their First Class Certificate endorsed accordingly.

## **5. Certificates as Extra First Class Engineers :-**

The examinations for the Extra First Class Certificates are intended for officers who wish to prove their superior qualifications and to have certificates of the highest grade granted by the Central Government (See rules 45 and 69).

## **6. Qualifications for Second Class Certificate :-**

**1**

(1) A candidate for a Second Class Certificate shall satisfy the following requirements, namely:

(a)

(i) He shall be within the age limit of 20 years at the time of his entry in the workshop or as the case may be the training institutions referred to in rules 7 and 10 respectively :

Provided that the requirements of this clause shall not apply to candidates qualifying for examination under rule 7A, 8 or 8A if they are otherwise eligible to appear for the examination under this rule.

(ii) He shall not be less than 22 years of age at the time of appearing for examination for Second Class Certificate.

(b) Educational Qualification :He shall have passed the Second Year Examination of the two year Inter-Science Course of a recognised University or Board or any other equivalent examination with Mathematics and Physics as separate subjects :

Provided that the requirements of this clause shall not apply to candidates qualifying for examination under rule 7A if they are otherwise eligible to appear for examination of Second Class Certificate.

(c) Workshop Service:He shall satisfy one or other of the requirements as regards workshop service or other training or a combination of both as set out in rule 7, 7A, 8, 8A, 9, 10 or 11. (A) Sea Service :He shall have performed the requisite sea service set out in rule 15.

(e) Examination.He shall have passed the examination set out in rule 63.

(2) Nothing contained in Cl. (b) of sub-rule (1) shall apply to any candidate who has completed training course of Directorate of Marine Engineering Training having been admitted in that institution prior to August, 1975.

(3) A candidate for the endorsement of a certificate shall have performed extra sea-service set out in rule 16 and shall be required to pass examination set out in rule 67.] (A) Workshop Service

1. Subs. by G.S.R. 2447, dated 29th August, 1975.

**7. Service as Apprentice Engineer or Fitter :-**

A candidate must have performed satisfactory service for not less than four years as apprentice engineer or eight years as fitter

(including apprenticeship in the trade) on work suitable for the training of a marine engineer in the manufacture or maintenance of machinery. Not less than one of these four years' workshop service required as apprentice engineer should have been devoted to fitting, erecting or repairing machinery of a suitable size or description (e.g., work on marine engines, substantial auxiliary machinery and steering gears of a type fitted in ships, or on motive power machinery which has a similar value in the training of marine engineers) either in the works or outside ; the remaining three years as apprentice engineer may have been spent on work of this nature or on other suitable work, subject to a time allowance for each type of work, examples of which are specified below: one year has been spent in the drawing office, only half the additional time will count. Electrical shop or repair work not already covered above (excluding work of a minor nature) Full time up to one year, additional at half rate. Maximum total 18 months.

**7A. Holder of a sea-going Engine Drivers Certificate of Competency :-**

**1** A candidate who holds a sea-going Engine Driver's Certificate of Competency issued under Sec. 78 shall be eligible to appear at the Examination for Second Class Certificate of Competency subject to the following conditions, namely :

(a) that the candidate has performed workshop service of two years in a marine workshop or compensatory service at sea in accordance with rule 14 in lieu of the said two years of workshop service, and

(b) that he has completed in addition to the service mentioned in Cl. (a), the sea service as required under rule 15.]

1. Ins. by G.S.R. 2703, dated 25th November, 1969.

**8. Graduate Engineers :-**

**1**

(1) A candidate who holds a degree either in Mechanical Engineering or in Electrical Engineering of a recognised University, the full time course of study of which has been approved by the Central Government under rule 62, shall be eligible to appear in the examination for Certificate of Competency as Second Class Engineer subject to the provisions of sub-rules (2), (3) and (4).

(2) Any such candidate who holds a degree in Mechanical Engineering shall produce evidence to the satisfaction of the Chief

Examiner of having performed workshop service in a marine workshop, after obtaining his degree, for a period of not less than eight months :

Provided that where a candidate has performed such workshop service for lesser period but not less than four months, he may be permitted to make good the

(3) Any such candidate who holds a degree in Electrical Engineering shall produce evidence to the satisfaction of the Chief Examiner of having performed workshop service in a marine workshop, after obtaining his degree, for a period of not less than twelve months :

Provided that where a candidate has performed such workshop service for a lesser period but not for less than six months, he may be permitted to make good the deficiency in workshop service by service on day work or on regular watch on board a sea-going ship in the Merchant navy in the ratio of 3 months sea service equalling 2 months workshop service.

(4) Every such candidate shall produce evidence to the satisfaction of the Chief Examiner of having completed sea service as required under rule 15.

1. Subs. by G.S.R. 2703, dated 25th November, 1969.

### **8A. Diploma Holders :-**

(1) A candidate who holds a diploma in Mechanical Engineering of a Board of Technical Education of any State Government, the full time course of study of which has been approved by the Central Government under rule 62, shall be eligible to appear in the examination for Certificate of Competency as Second Class Engineer subject to the provisions of sub-rules (2) and (3).

(2) Any such diploma holder shall produce evidence to the satisfaction of the Chief Examiner of having performed workshop service in a marine workshop, after obtaining his diploma, for a period of not less than eighteen months :

Provided that where a candidate has performed such workshop service for a lesser period but not for less than six months, he may be permitted to make good the deficiency in workshop service by service on day work or on regular watch on board a sea-going ship in the Merchant Navy in the ratio of 3 months sea service equalling 2 months workshop service.

(3) Every such candidate shall produce evidence to the satisfaction of the Chief Examiner of having completed sea service as required under rule 15.]

**9. Student or Technical apprenticeships :-**

As a further alternative, the Chief Examiner will consider a candidate who has performed satisfactory service for not less than four years in an organised student or technical apprenticeship accepted by the Central Government, provided that he has obtained one of the technical qualifications, referred to in rule 62 and has devoted not less than one year to fitting, erecting or repairing machinery of suitable size or description. The Chief Examiner will be prepared to advise on the acceptability of any such apprenticeships for this purpose.

**10. Marine Engineer Training Schemes :-**

The Central Government have also approved the Marine Engineering Course conducted by the Directorate of Marine Engineering Training, which consists of three years' workshop training in a recognised Marine Engineering Works combined with theoretical instructions conducted in evening classes. The workshop service is followed by further one year's full day classes in Advanced Marine Engineering subjects. Candidates who have satisfactorily completed this course of training, or any modification of this scheme which may be approved by the Central Government or a similar scheme operated by recognised authorities in the United Kingdom, will be accepted.

**11. Schools outside India :-**

Courses of study and apprenticeships served in the Commonwealth or in the Republic of Ireland or any other country whose courses of study and apprenticeships may be recognised as equivalent to courses of study and apprenticeships in India will be considered, but time spent in technical establishments in foreign, countries will not be accepted except in special circumstances.

**12. Minimum age for apprenticeship :-**

No period of workshop training or time devoted for apprenticeship spent before the age of 15 years can be accepted for the purpose of these rules.

**13. Testimonials :-**

All candidates will be required to produce testimonials as to their workshop service. These testimonials must be signed by the

employer or his representative, and must testify to the candidate's conduct and ability and state the kind of work on which he was engaged and the period of time spent in each branch, e.g., fitting, erecting, turning, machine work, etc. Testimonials will be returned to candidates when the examination is completed. A specimen copy of the form of testimonial is set out in Appendix E. This form of testimonial is not applicable in the case of apprentices trained under one or other of the schemes set out in rule 10.

#### **14. Compensatory Service :-**

<sup>1</sup> [Where candidates perform workshop service prescribed in rule 7, 7A, 8, 8A, 9, 10 or 11, deficiencies in such service as assessed by the Chief Examiner shall be made up either by further workshop service of a suitable nature or by compensatory service on regular watch or on day work at sea. The extent to which the deficiency in workshop service is to be made up shall be decided by the Chief Examiner.] Compensatory sea service must be performed either (a) on day work as engineer on board foreign-going or home-trade steamships of not less than 66 nominal horsepower and/or motor ships, of not less than, 373 brake horse-power, or (b) on regular watch on such ships as engineer. Time so spent on foreign-going ships will be accepted as having two-thirds of the value of suitable workshop service and on home-trade ships as having four-ninths of that value. No day work at sea performed before the age of 20 will be accepted. (B) Sea Service

1. Subs. by G.S.R. 2703, dated 25th November, 1969.

#### **15. Sea Service :-**

Candidates for a Second Class Certificate of Competency must, in addition to the above requirements, have completed the following period of sea service:

(a) For a Steam Certificate, 21 months, of which is least nine months must have been spent on the boilers and main propelling machinery of a steamship. This period of at least nine months must have included at least six months service on the boilers and six months' service on the main propelling machinery, but the service on the boilers and on the main propelling machinery may have been simultaneous.

(b) For a Motor Certificate, 21 months, of which at least six months must have been on the main propelling machinery of a motor ship. The remaining 15 months (or balance of 15 months) may have

been spent on the main propelling machinery of a steam or motor ship, or on suitable auxiliaries of a steam or motor ship (See rule 27), or to the extent of not more than six months on the boilers of a steamship or on day work [See rule 17 (a)].

(c) For a Combined Steam and Motor Certificate, 24 months, of which at least :

(i) Nine months must have been spent on the boilers and main propelling machinery of a steamship. This period must have included at least six months' service on the boilers and six months' service on the main propelling machinery, but the service on the boilers and main propelling machinery may have been simultaneous; and

(ii) Six months must have been spent on the main propelling machinery of a motor ship. The remaining nine months (or balance of nine months) may have been spent on the boilers of a steamship or on the main propelling machinery of a steam or motor ship or on suitable auxiliaries of a steam or motor ship (See rule 27), or on day work [See rule 17 (a)].

#### **16. Further Sea Service :-**

Candidates for the endorsement of a Second Class Certificate of Competency must have completed.

(a) for the Motor Endorsement of a Steam Certificate, a further period of three months, provided that not less than six months' service in all shall have been service on the main propelling machinery of a motor ship;

(b) for the Steam Endorsement of a Motor Certificate, a further period of six months, provided that not less than nine months' service in all shall have been service on the boilers and main propelling machinery of a steamship. This period of at least nine months must have included at least six months service on the boilers and six months' service on the main propelling machinery but the service on the boilers and on the main propelling machinery may have been simultaneous.

#### **17. Nature of Service :-**

Service required under rules 15 and 16 must have been performed in foreign-going steamships of not less than 66 nominal horse-power and/or motor ships of not less than 373 brake horse-power, as an engineer at sea on regular watch, i.e., on watch for not less

than eight out of each 24 hours' service claimed, except that :

(a) day work, by which is meant engineering work at sea other than that performed on regular watch, will be counted at half rate with a maximum allowance of six months towards the qualifying period of sea service, provided that the work has been carried out within the engine or boiler spaces of a steam or motor ship at sea;

(b) the conditions under which service performed in ships other than foreign-going ships is allowed to count are set out in rules 28 to 35.

### **18. Determination of horse-power :-**

The nominal horse-power of a steamship, as given on the Certificate of Registry, may in all cases be accepted by the Examiner: or it may be determined by the following formula :  
Where H = heating surface of main boilers in square feet, measured down to the level of the fire bars, but excluding the front tube plate. D<sup>2</sup> = square of diameter of low pressure cylinder, or sum of squares of diameters of cylinders in non-compound engines, measured in inches. S = length of stroke of engines in inches. P = pressure of main boilers in pounds per square inch. The brake horse-power of a motor ship, as given on the Certificate of Registry, may in all cases be accepted by the Examiner. It may, however, be noted that 1N.H.P. = 5.65 B.H.P.

### **19. Remissions :-**

**1**

(1) Any candidate who before commencing his qualifying sea service has passed Part A of the examination for a Second Class Certificate or has obtained a certificate, diploma or degree recognised by the Central Government as conferring full or partial exemption from Part A of the examination for a Second Class Certificate of competency may be granted a remission of sea service not exceeding three months.

(2) Any candidate who after commencing his qualifying sea service has passed Part A of the examination for a Second Class Certificate may be granted a remission of

(a) two months sea service, if he has passed the said Part of the said examination before completing nine months qualifying sea service ;

(b) one month sea service, if he has passed the said part of the

said examination, after completing nine months but before completing fifteen months of qualifying sea service.]

1. Subs. by G.S.R. 2703, dated 25th November, 1969.

**20. Period of Sea Service for Certificate :-**

Candidates for a First Class Certificate of Competency must, except as provided in rule 24, hold a Second Class Certificate, and, whilst holding it, must have completed the same period of sea service as that required in rule 15 for the Second Class Certificate for Steam or Motor, as appropriate.

**21. Period of Sea Service for endorsement :-**

Candidates for the endorsement of a First Class Certificate of Competency must have completed the same period of sea service as that required in rule 16 for the endorsement of a Second Class Certificate for Steam or Motor, as the case may be.

**22. Nature of Service :-**

Service required under rules 20 and 21 must have been performed in foreign-going steamships of not less than 99 nominal horse-power and/or motor ships of not less than 560 brake horse-power as an engineer at sea on regular watch, i.e., on watch for not less than eight out of each 24 hours' service claimed. This service should have been performed as senior engineer in charge of the entire watch, but service as second in seniority on ships propelled by two or more sets of engines, or in large single-screw ships where there are three or more engineers on regular watch at the same time, will also be accepted at full time value. Service below this rank on such ships will count at half rate. Day work will not be accepted. The conditions under which service performed in ships other than foreigngoing ships is allowed to count are set out in rules 28 to 35.

**23. Remissions :-**

**1**

(1) Any candidate who before commencing his qualifying sea service has passed Part A of the examination for a First Class Certificate or has obtained a certificate, diploma or degree recognised by the Central Government as conferring full or partial exemption from Part A of the examination for a First Class Certificate of Competency may be granted a remission of sea service not exceeding three months.

(2) Any candidate who after commencing his qualifying sea service has passed Part A of the examination for a First Class Certificate may be granted a remission of

(a) two months sea service, if he has passed the said Part of the said examination before completing nine months qualifying sea service;

(b) one month sea service, if he has passed the said Part of the said examination, after completing nine months but before completing fifteen months of qualifying sea service.]

1. Subs. by G.S.R. 1805, dated 11th November, 1963.

#### **24. Grant of Certificate in Special Case :-**

The Chief Examiner may, in special circumstances, allow a candidate who, in consequence of service abroad, has had no opportunity to obtain a recognised Second Class Certificate to be examined for a First Class Certificate, provided he is able to produce satisfactory evidence as to the character of his service, and in particular that his apprenticeship or technical studies, including workshop service, would have been acceptable if he were a candidate for the Second Class Certificate in India in the normal way. In general, such a candidate will be required to prove that he has served for at least four years in steam-ships of at least 99 nominal horse-power and or motor ships of at least 560 brake horse-power, of which period at least 18 months must have been spent in charge of the entire watch on the boilers and main propelling machinery of a steamship or on the main propelling machinery of a motor ship. A candidate must be able to give evidence of sufficient workshop training and, where appropriate, of studies at an appropriate technical institution. In particular he must satisfy the Chief Examiner that he is competent in Drawing and will be required to pass an additional paper equivalent to Sec. (iv) of Part A of the Second Class examination in this subject, unless he could be exempted from this paper as provided for in rule 62. If any such candidate fails to pass the examination for the First Class Certificate but shows that he has reached the standard required for a Second Class Certificate, the Central Government may grant him such a certificate, but no part of the fee will be returned.

#### **25. Nature of qualifying service :-**

Sea service means service on Articles of Agreement as engineer. When part or whole of the qualifying service has been performed in

ships which for considerable periods have not been at sea, a statement or certificate from the owners of the ship must be produced showing the proportion of time actually spent at sea. If this time amounts to not less than two-thirds of the service required to qualify for the examination, the service will be accepted in full, but where the actual service at sea falls below this proportion, the deficiency must be made up by additional service at sea.

**26. Non-Engineer Service :-**

Service in ships where a watch-keeping engineer is, as part of his regular duties, required to do stoking or other work not usually performed by an engineer in the Merchant Navy, cannot be accepted as qualifying.

**27. Service on auxiliary machinery :-**

Time served on auxiliary machinery run in conjunction with the main propelling machinery (i.e., on auxiliaries which are essential to the running of the main propelling machinery and/or boilers) will be subject to the conditions as regards the minimum service on boilers and main engines, be allowed to count in full towards the qualifying period of sea service. Time served on suitable auxiliaries run independently of the main propelling machinery will be allowed to count at half rate.

**28. Home-Trade Ships :-**

Service in home-trade ships will be allowed to count at two-thirds rate, provided that the class of service and the horse-power of the ship render the service acceptable in all other respects.

**29. Qualifying Coasting Voyages :-**

In the case of Indian home-trade and coasting voyages extending beyond a distance of 500 miles from the port of departure such service will count as foreign-going voyages, and will be reckoned as full time.

**30. Service in ships trading entirely abroad :-**

Service in ships trading entirely abroad will be accepted as equivalent to service in foreign-going ships, provided that the distance between the ports visited during the course of the voyage is at least 500 miles. If the distance is less than 500 miles, the service will be accepted as equivalent only to service in the home-trade, i.e., it will be allowed to count at two-third rate.

**31. Lake or river service :-**

Service as watch-keeping engineer in lake or river vessels will be accepted under the following conditions for a Steam or Motor Certificate, or a combined Steam and Motor Certificate, and will be counted at half rate (i.e., two months of lake or river service will be regarded as equivalent to one month foreigngoing sea service) provided that :

(a) in the case of a candidate for a Second Class Certificate the service has been performed in lake or river steam vessels of not less than 66 nominal horse-power and/or motor vessels of not less than 373 brake horsepower, and the candidate has had, in addition to his lake or river service, at least three months' qualifying service\* at sea in a foreign-going ship of the equivalent service in the home-trade ; or

(b) in the case of a candidate for a First Class Certificate, the service has been performed in lake or river steam vessels of not less than 99 nominal horse-power and/or motor vessels of not less than 560 brake horsepower, and the candidate has had, in addition to his lake or river service, at least six months' qualifying service\* at sea in a foreign-going ship or the equivalent service in the home trade.

### **32. Service in tugs, dredgers, fishing vessels or pilot vessels :-**

Service as engineer in sea-going tugs, dredgers or fishing vessels, and in pilot vessels when on their station or when going to or returning from their station, will be accepted towards the qualifying period of service at half rate.

### **33. Further requirements :-**

Candidates for Second Class Certificates may perform all their qualifying sea service on regular watch in sea-going tugs, dredgers, fishing vessels or pilot vessels, of not less than 66 nominal horse-power, if steam, or 373 brake horse-power, if motor. Candidates for First Class Certificates must, however in addition to their service in charge of the watch in sea-going tugs dredgers fishing vessels or pilot vessels, of not less than 99 nominal horse-power, if steam, or 560 brake horse-power, if motor have served in a qualifying capacity (See rule 22) for not less than six months in a foreign-going ship or have performed equivalent service in the home-trade.

### **34. Service in Yachts :-**

Service as watch-keeping engineer at sea performed in yachts of

the horse-power referred to in rules 17 and 22 will be accepted at two-thirds rate, provided the service satisfies the requirements set out in those rules and the candidate's name is entered on the ship's Articles of Agreement with his rank shown as engineer.

**35. Further requirements :-**

A candidate for a First Class Certificate must, in addition to his service in yachts, have had at least three months' service in a qualifying capacity on board a foreign-going ship or the equivalent service in the home trade, unless he has served for 27 months as Chief Engineer or for three years as a Second Engineer in a steam yacht of not less than 99 nominal horse-power and/or a motor yacht of not less than 560 brake horse-power.

**36. Testimonials :-**

Every candidate must produce testimonials in respect of the qualifying period of his service signed, in each case, by the Chief Engineer under whom his service has been performed, stating his actual rank on watch, the number of engineers simultaneously on watch on the boilers and/or the main propelling machinery and the nature of the duties performed by him. When the candidate is a Chief Engineer, he should produce testimonials signed by the Engineer Superintendent, or by the Managing Owner or Secretary of the Company. It is desirable that the whole of the candidate's sea service should be covered by testimonials certifying to his sobriety, experience, ability and general good conduct. The conditions under which sea service must be performed in order to count towards the qualifying periods for Second and First Class Certificates are set out in rule 15 et. seq.

**37. Endorsement of Testimonials. :-**

The testimonials signed by Chief Engineers should preferably be endorsed by the Engineer Superintendent or by the Master or other representative of the owner. Testimonials signed only by the Company's Superintendent or other officials will not, as a rule, be regarded as sufficient.

**38. Form of Testimonial. :-**

A specimen copy of the form of testimonial is set out in Appendix E. Testimonials will be returned to candidates when the examination is completed.

**39. Physical or mental defects :-**

<sup>1</sup>If the Examiner of Engineers finds that a candidate is afflicted

with deafness or with some other physical or mental infirmity and is satisfied that the degree of infirmity is such as to interfere with the proper performance of the candidate's duties, he shall report the case with full particulars to the Director-General of Shipping<sup>2</sup> [for such action as may be deemed necessary].]

1. Subs. by G.S.R. 2703, dated 25th November, 1969.

2. Ins. by G.S.R. 13, dated 27th December, 1973.

**40. Verification of sea service. :-**

Service which cannot be verified by proper entries in the Articles of Agreement of the ships in which the candidates have served cannot be counted. In all cases, the candidates' names must have been duly entered on the ship's Articles of Agreement as engineers in the ranks in which they were actually serving.

**41. Testimonials to be submitted in time :-**

As discharges and testimonials may have to be forwarded to the Shipping Master for verification, they must be handed in, together with the form of application, not less than one week before the date of the examination for which the candidate desires to appear. In the absence of the necessary verification, the candidate cannot be examined.

**42. Confirmation or endorsement of testimonial. :-**

Where, as in the case of the service of engineers in foreign ships, the length of service cannot be verified by the Shipping Master, the testimonials of service must be confirmed either by the Consul of the country to which the ship in which the candidate served belonged, or by some other recognised official authority of that country, or by some responsible person having personal knowledge of the facts required to be established. Where the testimonial is not confirmed by a Consul or other official authority of the country referred to, it should be endorsed by an Indian Consular Officer.

**43. Calculation of Service. :-**

The candidate's service, as shown on his discharges, will be reckoned by the calendar month, i.e., the time included between any given day in any month and the preceding day of the following month, both inclusive. The number of complete months from the commencement of the period, ascertained in this way, should be computed, after which the number of odd days should be counted. The day on which the Agreement commences, as well as that on which it terminates, should both be included, and all odd days

added together and reckoned at 30 to the month.

**44. Penalty for misconduct. :-**

Candidates who have neglected to join their ships after having signed Articles of Agreement, or who have deserted their ships after having joined, or who have been found guilty of gross misconduct, will be required to produce satisfactory proofs of two years' subsequent service and good conduct at sea, unless the Chief Examiner, after having investigated the matter, should see fit to reduce the time.

**45. Qualifications. :-**

A candidate for this certificate must possess a First Class Combined Steam and Motor Certificate, or a First Class Engineer's Certificate for the one motive power endorsed for the other, or a First Class Certificate of Service, but is not required to have performed any additional sea service.

**46. Application for Examination. :-**

Candidates who have completed the necessary qualifying service and who desire to take the examination for a First or Second Class Certificate of Competency should fill up a form of application (Exn. 3) and pay the appropriate fee (See rule 52) at the Mercantile Marine Department Bombay or Calcutta, signing the declaration on the form of application in the presence of the Examiner. The form, properly filled in, together with the candidate's certificate of apprenticeship, testimonials, discharges, certificate of competency or service, if any, and the like should be lodged with the Examiner at least one week before the day of examination. A candidate may, however, if he prefers, submit his application and papers by post to the Principal Officer of the Mercantile Marine Department, Bombay or Calcutta, where he desires to be examined; he should remit the fee at the same time. If a candidate adopts this course, he will be required to sign his declaration in the presence of the Examiner at the opening of the examination. Candidates will be informed as soon as possible whether their applications have been accepted or not; if they are accepted, candidates will be supplied with a copy of the instructions to be observed during the examination.

**47. Proof of Nationality. :-**

Every candidate for a certificate of competency of any grade will be required to produce proof of nationality along with his application. Proof of nationality will in general involve the production of a birth certificate or of a certificate of naturalisation. Failing this, the

applicant shall furnish all possible documentary evidence of nationality or of the birth and nationality of his parents. If the applicant is an alien, he shall produce an official document testifying to his nationality.

**48. Knowledge of English Essential. :-**

All candidates must prove to the satisfaction of the Examiners that they can speak and write the English language sufficiently well to perform the duties required of them on board ships.

**49. Age. :-**

Proof of age shall be covered by a birth certificate or other documentary evidence.

**50. Penalty for offering gratuity. :-**

If a candidate offers a gratuity to any officer of the Central Government, he will not be allowed to take any examination for twelve months.

**51. Examination of personnel of Indian Navy. :-**

Engineer Officers, Officers of the Engineering Specialisation, Artificer Engineers, Chief Engine Room Artificers, Engine Room Artificers, Chief Mechanics and mechanics who have served or are serving in the Indian Navy may be examined for certificates of competency on the same conditions as Engineers in the Merchant Navy. Applications shall be made in accordance with rule 46, except that naval officers shall furnish a statement of service This penalty is additional to any penalty to which the candidate may be liable under the criminal law. together with testimonials in respect of all sea-going appointments and of the last active appointment. Ratings shall furnish their Naval Service Certificates.

**52. Examination Fee. :-**

A candidate will be required to pay the following fee on each occasion on which he presents himself for an examination either for a certificate of competency or for the endorsement of a certificate of competency : Note."Endorsement" means the endorsement of an ordinary (steam) certificate to the effect that the holder is qualified to act as first or second class engineer, as the case may be on board a motor vessel, or vice versa. No part of the fee will be returned to a candidate who takes the examination or any part of it, or is credited with full exemption or any part of it, or is credited with full exemption from Part A.

**53. Enquiry Fee. :-**

A person enquiring as to his eligibility for examination will be required to pay the prescribed fee before any step is taken to enquire into his service or to test his qualifications, etc.

**54. Issue of Certificates. :-**

When the candidate has successfully completed all parts of his examination, he will receive a form authorising the Principal Officer of the Mercantile Marine Department to whom it is addressed to issue the certificate. Certificates of competency, or certificates of service, or certificates of competency granted by other Governments but declared to have the same force as those granted under the Act, of a lower grade, will not be returned to successful candidates. Other candidates will receive a record of their examination results on form Exn. 45. This form must be produced to the Examiner when a candidate next presents himself for examination.

**55. Service found to be insufficient. :-**

If, after a candidate has passed the examination, it is discovered on further investigation that his services are insufficient to entitle him to receive a certificate, the certificate will not be granted until the candidate has performed the amount of service on which he was deficient, and has been re-examined, unless the Central Government sees fit to dispense with the re-examination.

**56. Copy of lost certificate. :-**

An applicant for a certificated copy of a lost certificate of competency should fill in a form of application (Exn. 23) giving the necessary particulars, and delivering it to the Principal Officer of the Mercantile Marine Department who issued the certificate, paying at the same time the appropriate fee (Rs. 10 for an Extra First Class or First Class Certificate and Rs. 5 for a Second Class Certificate). A declaration as to the circumstances in which the certificate was lost must be made by the applicant before the Principal Officer. A fee of Re.1 only is chargeable if the applicant can prove that the certificate was lost through shipwreck or fire.

**57. Re-examination. :-**

Ordinarily, a candidate may present himself for re-examination at any time after one month has elapsed since his previous attempt, but if he fails three times in Part A or three times in Part B within any period of three months he will be debarred from re-examination for a period, depending on the circumstances, of up to three months or in exceptional cases, up to six months.

**58. Penalties for failure in examinations. :-**

It is evident that ignorance of those subjects which form a vital part of a marine engineer's daily work (e.g., questions on manipulation and reading of the water-gauge, the danger of fire and explosion in steam and motor vessels, etc.) can easily cause acts or omissions which would seriously endanger a ship. In particular, candidates should be very familiar with the water-gauge (See Appendix H). A failure in one of these subjects, either in the Engineering Knowledge paper or the oral test in Part B of the examination, will be regarded as failure in practical knowledge, and any candidate so failing will not be allowed to present himself for re-examination until he can produce proofs of further service at sea in a qualifying capacity. The period of the further service which will be required will be assessed in each individual case by the Chief Examiner but will not exceed six months.

**59. . :-**

Should a candidate fail through ignorance of fundamental principles or on account of general defectiveness in the examination, he shall not be allowed present himself for re-examination until a period of time to be fixed by the Chief Examiner has elapsed. Such period will not usually exceed three months, but in the case of a subsequent failure on account of general defectiveness the penalty may, in exceptional circumstances, be increased to a maximum of six months.

**60. Place and day of examination :-**

The examination centres are located at the ports of Bombay and Calcutta. The examinations at both these ports will ordinarily commence on the third Monday in each month for both Second Class and First Class Certificates. The information regarding actual dates of the examination may be obtained from the Principal Officer, Mercantile Marine Department, Bombay/Calcutta. The timetable of the different examinations are given in Appendix 'B'. The examination for Extra First Class Certificates will commence on the Tuesday following the third Monday in January and July of each year.

**61. Exemptions. :-**

The examinations for Certificates of Competency (First Class and Second Class) are divided into two parts as indicated in rules 63 and 65 and candidates who have attended approved courses of instruction during their apprenticeship and have obtained

certificates showing that they have passed the appropriate examination at the termination of the course will be granted exemption from the whole or part of Part A as shown in rules 64 and 66.

## **62. Approved courses. :-**

<sup>1</sup>[(1) The Central Government has approved certain courses of instructions leading to Degrees in Engineering, offered by the Institutions given in Appendix I. The courses in Engineering leading to a degree offered by other institutions and recognised under sub-rule (2) shall be added to Appendix I from time to time. Candidates may obtain information regarding recognition of courses offered by an Institution from any office of the Mercantile Marine Department.

(2) The Central Government may also recognise courses leading to a University Degree or Diploma in Engineering awarded in India or other countries abroad provided evidence is produced to the satisfaction of the Central Government as to the suitability of the courses. Candidates may also be allowed either complete or partial exemption from Part "A" of the examination for the First and Second Class Certificates of Competency, if they satisfy the Central Government that they have obtained suitable degree or similar qualifications in appropriate subjects from a recognised University or place of Higher Education.

(3) The Central Government has approved certain course of instruction recognised by the Ministry of Transport, United Kingdom, as leading to the Higher National Diploma and Higher National Certificate in Mechanical Engineering in the United Kingdom, for the purposes of examinations for both the First and Second Class Certificates of Competency. Also certain courses of instruction recognised by the Ministry of Transport, United Kingdom, as leading to Ordinary National Diploma and Ordinary National Certificate in Mechanical Engineering in the United Kingdom, have been approved by the Central Government for the purpose of examination for the Second Class Certificate of Competency only, provided that the syllabus accords with and is comparable to the syllabus laid down by the Central Government for the Second Class Examination. This has special reference to the syllabus for Heat and Heat Engines.<sup>2</sup> [No exemption will be granted in respect of paper IV of Part 'A' of the second class examination (Drawing) except to :

- (i) the holder of a Higher National Diploma ; or
- (ii) the holder of a Higher National Certificate who also holds an Ordinary National Certificate with Drawing at the S. 2 level; or
- (iii) the holder of an Ordinary National Certificate with Drawing at the S. 3 level ; or
- (iv) the holder of an Ordinary National Diploma granted under Alternative Schemes of Training of Engineer Officers which is approved by the Ministry of Transport, United Kingdom ; or
- (v) an apprentice under the said Alternative Schemes of Training, who has failed in the Ordinary National Diploma examination, but who has passed in Drawing and two other subjects common to the Diploma examination and Part A of the Second Class examination.]
- (4) The Central Government has also approved certain courses of instruction leading to the Associateship in Mechanical Engineering of the Royal College of Science and Technology, Glasgow, and the special Technological Certificate of the Republic of Ireland, Department of Education.
- (5) Candidates for either the Second or First Class Certificate of Competency who have satisfactorily completed the Alternative Scheme for the training of Marine Engineers in the United Kingdom, approved by the Ministry of Transport, United Kingdom, as mentioned in rule 10 and have, after the completion of sea service required in the second phase of that Scheme, to the satisfaction of the Ministry of Transport, United Kingdom, attended part time instruction during their workshop service and obtained the group endorsement in Naval Architecture, Electrotechnology and Power Plant Operation and Management will be exempted from Sec. 1 of Part 'B' of the examination.

1. Subs. by G.S.R. 2703, dated 25th November, 1969.
2. Subs. by G.S.R. 1805, dated 11th November, 1963.

**63. Examination for Second Class Certificate. :-**

The Syllabuses for the Second Class Engineer's examination are given in Appendix 'C'. The examination is divided into two parts consisting of six Sections as follows :

**64. Exemption. :-**

Candidates may be exempted from Part 'A' or some portion of it and may take the examination in separate parts as follows :

**1** [(a) (i) Graduates in Mechanical Engineering from recognised institutions shall be granted exemption from the whole of Part 'A' of the examination for Certificates of Competency as Second Class or First Class Engineers.

(ii) Graduates in Electrical Engineering from recognised institutions shall be granted exemption from Secs, (i), (ii) and (iii) of Part 'A' of the In the examination for Combined Steam and Motor Certificate a third three-hour paper in Engineering Knowledge is set.

(iii) Holders of Diplomas in Mechanical Engineering from recognised Boards of Technical Education of State Governments shall be granted exemption from Sec. (iii) of Part 'A' of the examination for Certificate of Competency as Second Class Engineer.

(iv) An alternative Training Scheme apprentice who fails to pass the examination for the Ordinary National Diploma but who has passed in three of the four subjects common to the diploma and of Part 'A' of the examination for Certificate of Competency as Second Class Engineer shall be granted exemption from the said examination in the subjects in which he has passed in the Diploma examination.

(v) A candidate who has passed with mathematics the Intermediate Examination or First Year B.Sc. Degree Examination of a recognised Indian University or a similarly approved course to the satisfaction of the Chief Examiner shall be granted exemption from Sec. (iii) of Part 'A' of the examination for Certificate of Competency as Second Class Engineer.]

(b) A candidate may present himself either for the whole of Part 'A' of the examination, or, if exempted under (a) above from certain subject(s) of the examination, for the remaining subject or subjects, at any time after he has completed the necessary workshop service.

(c) A candidate who has not been exempted under (a) (i) above from Part 'A' or a Section of it, or has been exempted under (a) (ii) above only, and who, when taking Part 'A' of the examination passes in at least two subjects, will not be required to take those subjects again and may present himself for re-examination in the remaining subject(s) at any time. If he passes in one subject only, he must sit for the whole Part on re-examination.

(d) A candidate may take Part 'B' or that Section of it from which he is not exempted at any time after he has completed the

necessary periods of qualifying workshop and sea service, provided he also takes at the same time the whole of Part 'A' of the examination or such subjects, if any, in that part, in which he has not already passed or from which he has not been exempted under (a) above.

(e) A candidate will not be given a 'pass' in Part 'B' or in either Section of Part 'B' unless he completes Part 'A' at the same time as Part 'B' or has previously completed it or has been exempted from it.

(f) A candidate who when taking Part 'B' passes in Sec. (i), (Electro- technology and Elementary Naval Architecture), but fails in Sec. (ii) (Engineering Knowledge and Oral), will be given a pass in Sec. (i) and may sit for re-examination in Sec. (ii).

(g) A candidate who when taking Part 'B' passes in Sec. (ii), but fails in Sec. (i), will be given a pass in Sec. (ii) and may sit for re-examination in Sec. (i).

[(h) Candidates who have successfully completed a Marine Engineering Course conducted by the Directorate of Marine Engineering Training referred to in rule 10, shall, from the year 1974 and thereafter, be granted exemption from Part 'A' of the examination for the Certificate of Competency as Second Class Engineer:

Provided that they have secured not less than 40 per cent. marks in the individual subjects and 50 per cent. marks in the aggregate in the final passing out examination held by the said Directorate.]

1. Subs. by G.S.R. 2703, dated 25th November, 1969.

**65. Examination for First Class Certificate. :-**

The syllabuses for the First Class Engineer's examination are given in Appendix 'C'. The examination is divided into two Parts consisting of four Sections as follows :

**66. Exemption. :-**

Candidates may be exempted from Part 'A' or a Section of it and may take the examination in separate parts as follows :

(a) A candidate who holds a certificate, degree or diploma approved by the Central Government as stated in rule 62 for the purposes of the First Class Certificate of Competency and who has been exempted from the Second Class examination in Applied Mechanics

or Heat and Heat Engines, or both, will also be exempted from this examination in either or both these subjects.

(b) A candidate possessing a Second Class Certificate is allowed to take either the whole of Part 'A' or, if exempted under (a) above from one subject, the remaining subject.

(c) A candidate who has not been exempted under (a) above from Part 'A' or a Section of it and who, when taking Part 'A', passes in one subject only, will not be required to take that subject again and may sit for the remaining subject.

(d) A candidate may take Part 'B' or that Section of it from which he has not already been exempted at any time provided he holds a Second Class Certificate and has completed the necessary period of qualifying sea service, and provided also that he takes at the same time either the whole of Part 'A' of the examination or such subject, if any, in that Part, in which he has not already passed or from which he has not been exempted under (a) above.

(e) A candidate will not be given a pass in Part 'B' or in either Section of Part 'B' unless he completes Part 'A' at the same time as Part 'B' or has previously completed it or has been exempted from it.

(f) A candidate who when taking Part 'B' passes in Sec.(i) (Electrotechnology and Elementary Naval Architecture), but fails in Sec. (ii) (Engineering Knowledge and Oral), will be given a pass in Sec. (i) and may sit for re-examination in Sec. (ii).

(g) A candidate who when taking Part 'B' passes in Sec. (ii), but fails in Sec. (i), will be given a pass in Sec. (ii) and may sit for re-examination in Sec. (i).

**1** [(h) Candidates who have successfully completed Marine Engineering Course conducted by the Directorate of Marine Engineering Training, referred to in rule 10, shall, from the year 1975 and thereafter, be granted exemption from Part 'A' of the examination for the Certificate of Competency as First Class Engineer:

Provided that they have secured not less than 50 per cent. marks in the individual subjects and 60 per cent. marks in the aggregate in the final passing out examination held by the said Directorate.]

1. Ins. by G.S.R. 1130, dated 10th September, 1974.

**67. Examination for endorsement of Second and First Class Certificates. :-**

The examination consists of :

- (a) One written paper of three hours in Engineering Knowledge,
- (b) Oral. The syllabuses for these examinations are given in the Sections of Appendix 'C' relating to these subjects.

**68. Marks required for pass. :-**

Candidates will be expected to obtain a minimum number of marks in each subject in the written examination and not less than one-half of the total number of marks to secure a pass. In the oral examination a somewhat higher standard will be required. The result of the examination will be communicated to the candidate by the Examiner.

**69. Examination for Extra First Class Certificate. :-**

The examination for Extra First Class Certificate covers the syllabuses for the First Class and Second Class examinations, and also that given in Appendix 'D'. It is divided into two separate parts, 'A' and 'B'. No exemption from any of the subjects covered by the examination is granted. Candidates will be permitted either to take the whole of the examination at one time, or to take the two Parts at separate examinations, in which case a candidate must first pass in Part 'A' to qualify for entrance to Part 'B'. On the other hand, a candidate who chooses to take the whole examination at one time and passes only in Part 'B' will be eligible to sit for Part 'A' at any future examination and will be exempt from further examination in Part 'B'. Candidates must obtain a minimum number of marks in each paper, and not less than 60 per cent. of the total marks throughout the examination, either for the full certificate or for Part 'A' or 'B' if taken separately. No certificate will be issued until the candidate has passed both Parts of the examination.

**70. Punishment for misconduct. :-**

Where in the opinion of the Director General of Shipping, a candidate has been guilty of any misconduct in relation to an examination (including insolence to any Examiner or disorderly or improper conduct in or about the room where the examination is held) or a breach of any of these rules, the candidate may be punished in one or more of the following ways:

- (a) where the examination has not commenced or is not completed, the candidate may not be permitted to appear in the examination,

or, as the case may be, to take further part therein;

(b) where the result of the examination has been declared, the result of the candidate may be amended;

(c) where the candidate has been declared successful in the examination but has not been granted the necessary certificate, the certificate may be withheld, for such period as the Director General of Shipping may direct;

(d) the candidate may be debarred from appearing in any examination under these rules for such period as the Director General of Shipping may direct.

**71. Penalty for Copying. :-**

In the event of any candidate being discovered referring to any unauthorised book or paper or copying from another candidate or affording any assistance or giving any information to another candidate or communicating in any way with anyone during the time of examination or copying any part of the problems for the purpose of taking them out of the examination room, he will be regarded as having failed and will not be allowed to present himself for re-examination for a period of six months. A candidate guilty of a second offence of this nature will not be allowed to present himself for re-examination until twelve months have elapsed since the date of the second offence.