Educational (189 8) Department.

ORDINARY PRINTED.

G.O., No. 491

DATED 9 - 8 - 98

INDEXED. 25-9-98

[Despatch Abstract.]

Chemist & Druggist class in the medical College

Approving, subject to certain modifications & remarks, the scheme drawn up by the Committee for the reorganization of the ——— for the training of compounders for service under Govt.

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9/8/98

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Government {1898} of Madras.

EDUCATIONAL.

Recd. } 1898. *Enclosures*

Regd. *Spare copies*

G.O., No. 491, 9th August 1893.

AUGUST.

Chemist and Druggist Class in the Medical College.

Approving, subject to certain modifications and remarks, the scheme drawn up by the committee for the re-organization of the — and for the training of compounders for service under Government.

GOVERNMENT OF MADRAS.

EDUCATIONAL DEPARTMENT.

Read—the following papers :—

From Surgeon-Major-General C. SIBTHORPE, F.R.C.P.I., Surgeon-General with the Government of Madras, to the Secretary to Government, Educational Department, dated Rajahmundry, 29th April 1897, No. Tour-1.

I have the honour to transmit letter, No. 4050, dated 13th April 1897, from the Director of Public Instruction, submitting a scheme for the re-organization of the Chemist and Druggist class in the Medical College, Madras.

2. Dr. Duncan also submits papers relating to the training of compounders and states in paragraph 6 of his letter that I would address Government on the subject.

3. In April 1895 I placed myself in communication with the Director regarding the training of compounders. It appeared to me that the scheme proposed and sanctioned in G.O., No. 1677 L., dated 11th September 1888, as amended by G.O., No. 1662 L., dated 26th July 1889, fell short of requirements and I therefore suggested the desirability of the Medical College Council being called upon to propose a regular course of training for compounders which could be carried out in the Rayapuram and Provincial medical schools at the same time as the men were undergoing practical training in the dispensary of the clinical hospital to which they were attached. I enclose a copy of my letter to the Director for information so that all my views on the subject may be before Government. It is with reference to this letter that the Committee appointed by the Director has submitted its proposals.

4. I consider that the Committee has fully gone into the question and its recommendations meet with my approval except that, in my opinion, the qualifying examination should be held once a year instead of twice as suggested by the Committee. In this view the Director of Public Instruction concurs.

5. I need hardly expatiate on the importance of a suitable training being accorded to compounders. This class of men is likely to be constantly wanted in future, and as the reputation of the hospital to which they are attached depends in a large measure on their efficiency, it is most essential that steps should be taken to make them as efficient as possible so as to avoid the remotest possibility of any danger to patients through ignorance or inefficiency of the compounders. My experience shows that the men trained under the scheme sanctioned in the Government Order quoted above are still very incapable and do not come up to the standard required of them.

6. Under the above circumstances I strongly request that Government will be pleased to sanction the proposals of the Committee regarding the future training of compounders as amended in paragraph 4 of this letter, and also direct that from and after 1st May 1899 no men should be entertained as compounders who do not possess the certificate of qualification under the new scheme.

Enclosures.

From the Honourable Mr. D. DUNCAN, M.A., D.Sc., LL.D., Director of Public Instruction, to the Secretary to Government, Educational Department (through the Surgeon-General), dated Madras, 13th April 1897, No. 4050.

I have the honour to submit for the consideration of Government the report of the Committee appointed by me in May 1895 for the revision of the courses of study of the Chemist and Druggist class in the Medical College. This Committee, consisting of the gentlemen noted in the margin, was also requested, at the instance of the Surgeon-General, to consider the questoin of training compounders. In this communication I shall, however, confine my remarks to the portion of the report dealing with the Chemist and Druggist class.

Surgeon-Major J. L. VanGeyzel, M.B., F.I.C., F.C.S., President.
Surgeon-Captain C. L. Williams, M.D.
Assistant Surgeon R. Hollingsworth.

2. I think that it is unnecessary for me to detail at length the causes that have contributed to the unpopularity of the Chemist and Druggist class, as Government is already aware of them : *vide* G.O., No. 810, Educational, dated 7th October 1895. The Committee's proposals may be summarised under the following three heads :—

(1) Entrance test for admission to the Chemist and Druggist class.
(2) Revised courses of study, theoretical and practical.
(3) The conduct of the qualifying examinations in the various subjects under the Government Technical Examinations Scheme, and the granting of single-subject certificates, and eventually of a diploma, by the Commissioner for Government Examinations.

3. As regards No. (1), the Committee considers that it would suffice if the candidates for admission to the class were required to have passed the Lower Secondary Examination with English as the first language, instead of the Matriculation Examination or the compulsory portion of the Upper Secondary Examination, as required by G.O., No. 84, Educational, dated 8th February 1893. I am not prepared to support this recommendation. The Committee was evidently under a misapprehension in supposing that I suggested in paragraph 5 of my proceedings, No. 8183, dated 31st July 1895, read in G.O., No. 810, Educational, dated 7th October 1895, the substitution of the Lower Secondary for the Matriculation Examination as the admission test for the Chemist and Druggist class, my remarks having reference to the proposed class for compounders only. Moreover, I am convinced that the Lower Secondary Examination is too low to be the standard of admission to the above class, considering the scientific character of the subjects to be studied. The reversion to the old state of things would be a retrograde step. I would therefore make no change in the existing general educational qualifications required for Chemist and Druggist candidates; though I should be glad to relax the rule in favour of lower secondary candidates, if in any year there be no prospect of the class being formed through lack of really eligible candidates, subjecting them at the same time, as is the case at present with Native Military candidates, to a competitive examination in English composition and dictation. The strength of the Hospital Assistant department began to fall off when the standard of the admission test was similarly raised to that of the Matriculation Examination, but the Government will have noticed with satisfaction, from the report on the Medical College for the session 1895–96, that that department had already succeeded in attracting a fair proportion of Matriculates. There seems therefore no reason to despair of securing for the Chemist and Druggist class, if worked on improved lines, candidates of the requisite qualifications. The Surgeon-General whom I have consulted on this point is quite at one with me.

4. *No.* (2).—The revised courses of study proposed by the Committee meet with my approval and that of the Surgeon-General. The subjects are the same as at present, with the addition of Botany and Physics, in which the students are expected to possess fairly good knowledge : *vide* paragraph 7 of the Committee's report. Besides the theoretical course the students will be required to undergo a special laboratory

course for three hours a day thrice a week for a period of three months. The Committee considers that, pending the provision of a pharmaceutical or advanced chemical laboratory at the Medical College, this course may be taken in the chemical laboratory of the Chemical Examiner's office, under the immediate guidance and supervision of the two assistants to the Chemical Examiner. This proposal may be approved; and I would take this opportunity of suggesting that the Chemical Examiner be permitted to propose a reduction in the special fee to be charged for the course from Rs. 50 to Rs. 30: *vide* paragraph 3 of Dr. VanGeyzel's letter to the Principal, Medical College, dated 31st January 1896, herewith enclosed. In order that the students may acquire a commercial knowledge of the profession they are to follow and gain some experience in practical dispensing, and with a view also to supply chemists and druggists throughout the country with qualified assistants, it is proposed to require the students to undergo, after the expiry of the first year of study, a year's course in compounding in a chemist's shop to be approved of by the College Council, and to produce certificates from the principal of the firm concerned on the conclusion of the course in proof of their having satisfactorily undergone it. This I think is a step in the right direction. This arrangement would be attended with much success if a Pharmacy Act could be passed for Madras, but the Surgeon-General has expressed the opinion that there are practical difficulties in enforcing such an Act in India. The Committee's recommendation that no change need be made in the existing rate of fees—viz., Rs. 10 for each course of study—has my support.

5. *No.* (3).—I see no objection to the qualifying examinations being brought under the Technical Examination Scheme, and to the grant of single-subject certificates and a final diploma on production of the shop-course certificate. The syllabuses in each subject, which have been drawn up with special reference to the Technical Examination Scheme, have my entire approval and that of the Surgeon-General.

6. I am submitting herewith also the papers relating to the training of compounders and trust that the Surgeon-General, through whom they will pass, will address the Government on the subject. The Surgeon-General is already in possession of my views in the matter.

7. In conclusion, I beg to request that the Committee's report and other correspondence on the subject of this letter may either be printed in full or returned to me when done with.

From Surgeon-Major-General C. SIBTHORPE, F.R.C.P.I., Surgeon-General with the Government of Madras, to the Director of Public Instruction, dated Ootacamund, 20th April 1895, No. 48-Tour.

I have the honour to attach copies of G.Os., No. 1677 L., of the 11th September 1888, and No. 1662 L., of 26th July 1889, regarding the training of compounders for work in hospitals and dispensaries.

2. It is very important that this class of hospital attendant should be properly and thoroughly trained.

3. You will see on page 2 of the first-mentioned Government Order that Surgeon-General Bidie proposed that probationers for the grade of compounder should be trained at a major dispensary for a term of six months and then made to pass a suitable examination conducted by the District Surgeon and his assistant. This was approved by paragraph 4 of the second order above quoted.

4. As this class of man is likely to be constantly wanted in future, I think it would be a good plan if you were to call on the Medical Council of the College to propose a regular course of training which could be carried out in the Ráyapuram and Provincial medical schools at the same time the men were undergoing the practical training in the dispensary of the attached clinical hospital. They should also suggest a text-book from which these men should be trained and on which they should be examined.

5. It appears to me that it would be far better if the examination was arranged for as in the case of the Sanitary Inspectors and that all compounders should in future receive their certificates of qualification under the rules now in force regarding such technical examinations.

6. If you concur with me and will obtain the information required under paragraphs 4 and 5 of this letter, I will address Government through you on the subject and suggest that after the 1st January 1897 no person should be appointed to the post of compounder who is not possessed of the certificate of having passed the above examination.

G.O., No. 1677 L., dated 11th September 1888.

Read—the following letter from G. BIDIE, Esq., M.B., C.I.E., Surgeon-General with the Government of Madras, to the Chief Secretary to Government, dated Ootacamund, 30th July 1888, No. 382-O:—

As promised in my letter, No. 418, of 17th December 1886, I have now the honour to address His Excellency the Governor in Council on the subject of compounders employed in the various hospitals in this presidency.

2. With a view to ascertain the present status of these men, a circular was issued calling on District Surgeons to submit a return of compounders serving in their respective districts, showing their pay, qualifications, &c. A general statement compiled from these returns is herewith enclosed for the information of Government.

3. The total number of compoundars employed is 267, and of these 44 cannot read or write English and 4 are equally ignorant of the vernaculars. Eighteen have had no previous training in the art of compounding and 47 cannot be trusted to make up an ordinary prescription without supervision. These figures show that a large number of these men are unfit for anything beyond ordinary menial work, and that to trust such with the duty of compounding medicines involves serious danger to the sick. One obvious cause of the defective education and training of the existing compounders has been the low rates of pay which they have in many instances been getting, and to secure a higher class of men more liberal allowances and superior conditions of service must be offered.

4. It will be seen from the accompanying statement that there is no uniformity in the rates of pay drawn by compounders. In some districts, notably in Salem and Vizagapatam, they get very liberal allowances, while in others their emoluments do not exceed the wages of an ordinary ward cooly.

5. There is also, as far as can be learned from the returns received, a want of system in the grant of increases of pay. In some instances men who cannot read and write English, and who cannot therefore be trusted to compound without supervision, are paid higher rates than others having superior qualifications. It appears as if in these cases more regard had been paid to length of service than to merit or efficiency.

6. I would therefore propose that, in future, a knowledge of the English language be made a condition of such service. No man should be made a compounder who cannot read and write English and who is not educated in the vernaculars of the district in which he seeks employment. He must further be required to produce a certificate of having undergone a course of training and passed a satisfactory examination in the art of compounding. It will also be necessary to take measures to secure the efficiency, or get rid, of all the men now in the service who cannot read and write English and cannot be trusted to make up an ordinary prescription without supervision. Such compounders are a constant source of danger to the patients of our hospitals, for it is practically impossible to keep an unceasing watch on their manipulations, and some day, when supervision is slack, they may, through ignorance, issue a poisonous dose of some common medicine or put up by mistake a poison instead of an innocent drug. Such mistakes might occur without attracting any attention, as the compounder would be unaware of his error, and the symptoms produced in the victim might be attributed

to some ordinary disease. I would therefore suggest that men of this type be allowed six months to qualify, and that failing to do so to the satisfaction of the District Surgeon they be discharged. This may seem a harsh measure, but in such a case the safety of the sick must be the first consideration.

7. The scale of pay I would suggest for compounders is as follows:—

	Rs.
During first 5 years of service	9
From 6 to 10 years of service	12
From 10 to 20 years of service	15
Over 20 years' service	18

The grant of these increments to be contingent on their keeping up their knowledge of drugs, approved discharge of duty and general good behaviour. This scale, though not very liberal is sufficiently so, I think, to attract a more intelligent class of men and to prevent the resort to illegal means for the purpose of increasing their emoluments.

8. Probationers for the grade of compounders should be trained at a major dispensary for a term of six months, and then be made to pass a suitable examination conducted by the District Surgeon and his Assistant. During this probationary period they should be allowed a stipend of Rs. 5 per mensem.

9. Trusting that these suggestions for the improvement of the position and prospects of a very useful class of servants may meet with the approval of Government.

Order—No. 1677 L., dated 11th September 1888.

The Surgeon-General's proposals have the approval of Government. They will be communicated to all District Boards and Municipal Councils, who will be requested to report at an early date what steps they propose to take to carry them out.

G.O., No. 1662 L., dated 26th July 1889, Government of Madras, Local and Municipal Department.

Read—again the following paper:—

G.O., No. 1677 L., dated 11th September 1888.

Abstract.—Approving the proposals of the Surgeon-General in regard to the pay and qualifications of compounders in this Presidency and communicating them to all District Boards and Municipal Councils with the request to report what steps they propose to take to carry them out.

Read—also replies to the above Government Order received from the Presidents of District Boards and Chairmen of Municipal Councils.

Order—No. 1662 L., dated 26th July 1889.

In G.O., No. 1677 L., dated 11th September 1888, the proposals made by the Surgeon-General in regard to the pay and qualifications of compounders employed in local fund and municipal hospitals and dispensaries in this Presidency were approved by Government and communicated to all District Boards and Municipal Councils for report as to the steps they proposed to take for carrying them out. The papers read above contain the replies to this reference.

2. After careful consideration of these papers, His Excellency the Governor in Council resolves not to accept, in future, any proposals for the increase of salary to existing compounders or for the creation of new appointments, unless the conditions as to qualifications and service required by the Surgeon-General have been fulfilled.

The salaries of existing compounders who are drawing more than they would be entitled to under the new scale need not, however, be reduced, provided that they qualify themselves as directed in the succeeding paragraph.

3. Some of the local bodies have recommended that the unqualified compounders now in their service should be allowed a longer time than six months in which to qualify. In deference to the representations made on this point, the Government will extend the period to one year. The services of compounders who fail to qualify within this period should be dispensed with, unless their retention is specially recommended by the District Surgeon.

4. The course of training and examination proposed in paragraph 8 of the Surgeon-General's letter in G.O., No. 1677 L., dated 11th September 1888, should invariably be insisted on; but, as observed by the Chingleput District Board, it is probable that volunteers will be found willing to undergo training in hospitals without pay in the hope of securing employment later on. No paid probationers should be employed unless (*a*) volunteers are not available, and (*b*) there is a vacancy, immediate or prospective, in which the probationer can be subsequently employed.

5. Some of the local bodies object to the scale of pay proposed by the Surgeon-General as being too high; but the Government does not concur in this view. Considering that the lives of the patients depend on the qualifications of the compounders, it is desirable that these men should be adequately paid. The new scale may, however, be introduced gradually.

6. The District Boards of North Arcot and Trichinopoly and the Municipal Councils of Negapatam and Vellore should submit separate applications for sanction to the alterations in, and additions to, establishments proposed by them.

No. 5483.

Forwarded to the Principal, Medical College, with a request that he will be good enough to obtain and submit the views of the College Council as to the best method of training the compounders for work in hospitals, &c.

(Signed) D. DUNCAN,
Director of Public Instruction.

8*th May* 1895.

From Surgeon-Captain C. L. WILLIAMS, M.D., Acting Professor of Materia Medica, to the President, Medical College Council, dated 18th October 1895, No. 1869.

I have the honour to forward the report of the Committee appointed by the College Council to consider the subject of the training of compounders for service under Government.

Report of the Sub-committee appointed by the Medical College Council on the 14th June 1895 (*vide* proceedings of that date) to consider the proposals as regards the education of compounders contained in correspondence forwarded with the endorsement of the Director of Public Instruction, Madras, No. 5483, dated 8th May 1895.

The following is a precis of the correspondence regarding the training of compounders.

1. The Medical College Council is called on to consider—
   (*a*) a regular course of training and
   (*b*) a text book for compounders.

Surgeon-Major-General Sibthorpe's proposal.

2. The course to be carried out in the Ráyapuram and Provincial medical schools to be six months in length and to be concluded by an examination.

Surgeon-General Bidie's proposal.

Or as an alternative : the course to be carried out in a Major dispensary and the examination at the end to be conducted by the District or Civil Surgeon.

3. English and the local vernacular are required.

4. The compounders' pay during their probationary period to be Rs. 5 per mensem and

5. Their pay when passed Rs. 9 rising by quinquennial instalments to Rs. 18.

6. Their present pay ranges from Rs. 3 (Madura) to Rs. 15 and in one district (Salem) Rs. 25.

7. From the tabulated report of returns sent in by the District and Civil Surgeons in reply to circular letter No. dated , from the Surgeon-General with the Government of Madras, it would appear that for Rs. 9 men can be found who can both read and write English. Each man would know his own vernacular.

8. The desirability of compounders—

(*a*) being trained ;
(*b*) of that training taking six months ;
(*c*) being qualified to read and write English and one vernacular ;
(*d*) being examined at the end of their six months' probationary course and certified or not according to proficiency.
(*e*) receiving Rs. 5 per mensem during their training and
(*f*) Rs. 9 rising Rs. 18 after entertainment, being conceded it only remains to consider—

The following are the recommendation of the Committee.

9. (*a*) where that training could be best carried out and
(*b*) what standard of education is necessary before a probationer should be entertained.

10. As regards 9 (*a*) it would appear probable that Rs. 5 would be insufficient to keep a compounder away from home. But if it were, his railway expenses would also be necessary, and if the examination become one of the technical ones, a small fee would further have to be paid by the district boards. Educating compounders, therefore, as a class at the medical schools would seem to be impracticable from a pecuniary point of view.

11. The text books recommended are—

Bidie's Handbook of Practical Pharmacy, if it were brought up to date with the last Pharmacopœia, or

"The Art of Dispensing" published at the "Chemist and Druggist" office.

Each major dispensary should have a copy of the text book selected and if the education is given to a class enough books should be kept in each medical school for each candidate to have one whilst going through his course.

12. As regards 9 (*b*), chemists and druggists who may hope to get considerably more pay than Rs. 9 rising to Rs. 18 per mensem are only required to have passed the Upper Secondary. Presumably the standard of the Lower Secondary would have to suffice for compounders.

13. As expense seems to preclude the possibility of the formation of compounders' classes at the medical schools, the same objection would hold against making their examinations one of the "Technical" class as in the case of sanitary inspectors. Men drawing Rs. 5 per mensem can afford neither the fee nor the transit expenses necessary to come to Madras for examination : and the examination must be a very practical one and therefore held at some single centre to have a uniform standard.

(Signed) C. L. WILLIAMS, M.D., Surgn.-Capt.,
Ag. Professor of Materia Medica and Pharmacy.

(„) R. HOLLINGSWORTH, Asst. Surgn.,
Lecturer on Botany.

16*th October* 1895.

From Surgeon-Major J. L. VanGEYZEL, M.B., F.I.C., F.C.S., President of the Committee appointed to revise the course of study for Chemists and Druggists, to the Principal of the Medical College, dated Madras, 31st January 1896, No. 2934.

I have the honour to forward herewith the report of the special committee appointed (in Proceedings of the Director of Public Instruction, No. 5689, dated 13th May 1895) to revise the course of study and examinations for Chemists and Druggists. The committee consisted originally of Surgeon-Captain C. L. Williams (Acting Professor of Materia Medica), Assistant Surgeon R. Hollingsworth (Assistant to the Professor of Materia Medica and Lecturer in Botany), and myself. The first-named officer having proceeded on furlough, the report is signed only by the two last ; but all the fundamental alterations and recommendations now submitted were discussed and agreed upon before Surgeon-Captain Williams' departure.

2. I have to express the committee's regret at the delay which has occurred in submitting the report. It was caused in the first place by my having proceeded on three months' leave, and in the second place by the length of time which was inevitably occupied in re-casting and fresh drafting the various syllabuses. I took the opportunity, when on leave in London, to obtain information for the committee from the Pharmaceutical Society of Great Britain ; and the committee felt that to hurry through the drafting of syllabuses would probably result in weakening the most important results of their labours. We therefore trust that the delay has in some measure been compensated by the fact that the recommendations submitted are the result of full deliberation. Before the committee had completed its work upon the Chemists and Druggists' curriculum, it was asked to take in hand also the formulating of a course of instruction and examinations for compounders. This also contributed towards the delay in a slight measure. Our recommendations on this subject have been incorporated into the report.

3. There is one recommendation as to the feasibility of which the committee have been in doubt, viz., the special laboratory course. Such a course the committee feels is a necessity for training chemists and druggists, and so it has been retained in our recommendations ; although we are aware that there are no means at present of giving this course of training in the college. It is such a course as is taught usually in a pharmaceutical or advanced chemical laboratory. The committee intend that this course should be one through which each candidate should work *individually* and that it should not consist merely of a course of class demonstrations given by the Professor or his Assistant. Surgeon-Captain Williams was of opinion that this course could not be taught by the Professor of Materia Medica, Mr. Hollingsworth considered that it might be possible for the Professor of Materia Medica to attempt it, and speaking for myself as Professor of Chemistry. I have neither the time nor the means to do justice to such a course. It will require a specially equipped laboratory, with balances, heating appliances, and a host of physical and chemical apparatus—in short a complete equipment for a small laboratory in which quantitative work could be carried on by each student working about three hours every other day under the direct supervision of the teacher. With a daily course of practical chemistry in the summer, occupying two hours a day, and two hours of daily lecturing through the winter session, the Professor of Chemistry can hardly be expected to devote three more hours every other day to College duties without detriment to the duties of the Chemical Examiner. Surgeon-Captain Williams thought that the course might be taught in the Chemical Examiner's laboratory, and in consideration of the importance and the necessity of such a course I have agreed to endeavour to arrange for students to work there in small batches under the two Assistant Chemical Examiners, if the College Council approve of this arrangement, and if the Commissioner for Government Examinations will recognise the course in the same way that the University recognises the course of practical chemisty taught there for the L.S. Sc., and the Arts degrees. It might be possible for me to direct such a course of instruction under the immediate supervision of the Assistant Chemical Examiners, and the requisite apparatus would all be at hand there and in daily use, without the necessity for fitting up apparatus specially every day as would be the case for a college class. The fee prescribed by the Government of India and which in this case would be divided between the Chemical Examiner's staff and Government is slightly higher than the fee which is charged for Practical

classes given in the college (Rs. 50 for a three months' course), but if that is considered too high I will address Government from the Chemical Examiner's department and request permission to lower the fee in the case of chemists and druggists students. I may state that to have students working in the Chemical Examiner's laboratory takes up time which would ordinarily be given to the legitimate work of the laboratory and consequently that time so spent has to be made up by working on holidays and beyond ordinary office hours. I do not therefore unreservedly approve of this arrangement and my acquiescence is given solely with the object of helping forward the reorganised course of instruction for chemists and druggists, and only until the college itself is in a position to undertake this course of instruction by the institution of a pharmaceutical laboratory, as to the need of which, not only for chemists and druggists, but also for other students of the college, the committee are unanimously agreed.

Report of the Committee on the courses of study and examinations for chemists and druggists and for compounders.

Objects.—I To revise the course of study and examinations for Chemists and Druggists.

II To consider the expediency of bringing their qualifying examinations under the Government Technical Examinations scheme.

III To consider the advisability of formulating a separate course for compounders.

Reasons.—The falling off in the number of students entering for this department of study. In their reviews of the last annual report of the Medical College, the Surgeon-General says: "the present course of training does not meet the requirements." either of compounders or of properly-trained chemists and druggists; and the Director of Public Instruction says: "the chemists and druggists class does not meet the purpose for which it was intended and early steps should be taken to mend matters."

1. The committee have made local enquiries as to the employment of chemist assistants, one of us while at home on privilege leave made enquiries from the Pharmaceutical Society of Great Britain, and having fully considered all aspects of the case we beg to submit the following report.

2. The falling off in the number of chemists and druggists students at the college may be attributed to two causes—

(*a*)—The raising of the standard of entrance from the Middle school to the Matriculation Examination.

(*b*)—There being no demand in the shops for the finished article as turned out at present.

3. (*a*)—The first explanation is borne out by the following table of figures:—

Standard of Entrance Examination and course of study.	Year.	Number of *Bonâ fide* Chemists and Druggists.	Number of failed L.M. & S. students.
No entrance examination	....	....	....
One year's course of study	1884–85	....	....
One course chemistry		6	....
One ,, Practical Chemistry	....	....	....
One ,, Materia Medica	....	....	....
One ,, Practical Pharmacy	1885–86	5	....
	....	....	....
Entrance—Middle School Examination	1886–87	2	....
(G.O., No. 588 of 10th September 1886) ..	1887–88	1	....
Two years' course of study	1888–89	1	....
Two courses of Chemistry	1889–90	2	....
Two ,, Practical Chemistry	1890–91	3	1
Two ,, Materia Medica	1891–92	3	4
Two ,, Practical Pharmacy	1892–93	5	9
Entrance—Upper Secondary (compulsory portion) or Matriculation.— (G.O., No. 84, Educational of 6th February 1893), Two years' course of study same as above.	1893–94	0	25
	Total number entered for 10 years ..	28	39
	of whom *number appeared for examination* ..	19	10
	and *the number who passed* ..	13	9

4. The statement that there has been a marked falling off in the number of the admissions into this class must however be qualified, because the entries under "failed L.M.and S. students" cannot be entirely excluded from the reckoning. They cannot all be said to have joined this class solely to take advantage of the cheaper rates of fees for again attending classes in which they had failed, since out of 39 of these entries 10 actually appeared for the examination, the result being a gain of nine qualified men to the ranks of chemists and druggists. It is evident, however, that the falling off in the numbers of those who joined the class at first hand was simultaneous with the raising of the standard of entrance examination. We consider that this examination may be safely lowered. The Director of Public Instruction suggests * the Lower Secondary Examination, or that candidates should satisfy the Professor of Chemistry as to their fitness to follow the course. We beg to propose that the following should be the standard of entrance examination.

* His Proceedings, No. 8183, dated 31st July 1895, paragraph 5.

5. The Lower Secondary, in which English is passed as the first language. This is the equivalent of the old Middle School Examination, which was formerly the qualifying entrance examination for Chemists and Druggists. We consider that this examination would be a sufficient preliminary test for the present at least.

Recommendation I—To lower the standard of Entrance Examination.

6. (*b*).—The next operative cause in reducing the number of admissions, viz., the absence of a demand for the class of men that we turn out, is a real one. Our locally-trained chemists and druggists, we are informed, have been tried in the larger shops and their employment has been in great part abandoned because of their deficiency in the practical knowledge and the skill which are requisite qualifications of a competent chemists' assistant. Men who have qualified at the Pharmaceutical Society of Great Britain are imported, showing that a demand for skilled assistants exists, and that our locally-trained men do not meet the requirements. We have carefully examined the present curriculum in order to see how far it meets the requirements of this class of chemists' assistant. We are aware that there are great difficulties in teaching, in one and the same class, students of very unequal attainments, students reading for University degrees as well as those preparing for the much lower qualifications of apothecaries, and of chemists and druggists. The difficulties are in themselves serious; but the Chemists and Druggists' curriculum, we consider, is deficient in these respects, viz., that while it gives the student a theoretical smattering of chemistry and pharmacy he gets no training in the actual work which he has to perform in the practice of his calling. The two courses of chemistry and practical chemistry are not followed up to their legitimate ending and his training stops short of the practical purpose for which he has followed them. In the materia medica courses also he learns the names of drugs and their doses, their botanical characters if learnt at all must be a mere matter of rote, he also learns how to dispense ordinary prescriptions and is shown general methods of making up the common classes of Pharmacopeial preparations such as infusions, decoctions, &c. The examination which he passes is in sympathy with the teaching and does not go far enough. If he passes it, he is sent out as a qualified "Chemist and Druggist," whereas in reality he is unfitted to do more than the practical work which is usually entrusted to a compounder. A man who has thus spent two years in a college expects more pay than the ordinary class of compounder, and firms who employ compounders are not prepared to pay higher salaries for this stamp of assistant. On the other hand, we believe that properly trained chemists' assistants would readily find employment, and the better class of firms would take such men in preference to importing the finished article from home at great cost.

7. The properly trained chemists and druggists, in our opinion, should not only understand the art of dispensing a prescription, but he should also be able to intelligently follow the instructions which are laid down in the British Pharmacopeia. He should be able to appreciate the descriptions of drugs given there and to practise with confidence all those chemical and physical operations which are enjoined by the British Pharmacopeia for the accurate compounding of drugs, for ascertai-

The principles on which the recommendations which follow are based.

their purity, and for determining their strengths. The successful practice of every profession depends largely upon a knowledge of its fundamental principles, and so we consider that the trained pharmacist must acquire a knowledge of (1) *Botany*, enough of it to enable him to understand the botanical descriptions of drugs as given in the British Pharmacopeia. Without a knowledge of the life history of plants he cannot apprehend that the specific botanical characters of a drug are the effects of physiological laws and not of chance, and he must inevitably fall into error if he fail to appreciate the limits within which the characters of a drug may vary under various conditions of the life of the plant.

Further he must possess a knowledge of (2) *Chemistry and Physics*, so that he may obtain an intelligent understanding of the nature and constituents of drugs. Without it how can he understand the distinctive physical and chemical characters of the drugs described, or appreciate the reasons for precautions enjoined for the successful preparation of many of the compounds in the British Pharmacopeia. If he has never used a chemical balance, or a thermometer, or made a specific gravity or a boiling-point determination, or even carried out an ordinary distillation, if he has not learnt to make up the standard solutions of the British Pharmacopeia or to perform those volumetric determinations which are there described, how can he be expected to handle the every day materials of his workshop with confidence, or dispense his drugs in accordance with the legal standards? Unless he has systematically and practically learnt, e.g., the various operations requiring the use of heat, the pharmaceutical methods of disintegration of solid substances, of expression, solution, filtration, and the modifications of these methods as applied to particular cases of the British Pharmacopeia, how is he to carry out, with confidence, the directions which are enjoined upon almost every page of the British Pharmacopeia. Our students have had no opportunity of *individually* acquiring this kind of practical knowledge, and this is the species of skill which is we believe in demand and is supplied by the chemists' assistants imported from home. If we cannot train men up to this standard, we must abandon the present classes, abolish the title of "chemist and druggist," and confine our efforts to turning out properly trained "compounders." Otherwise it is obvious that the present curriculum must be completely recast with a view to meet the requirements of the higher grade.

8. To point out the most successful system of instruction for this purpose must of course be speculative at the best. We have taken as our guide the regulations which govern the qualifications of the Great Britain Pharmaceutical Society, by following the lines indicated therein and by introducing modifications in accordance with local circumstances, we have drawn up a set of syllabuses attached hereto and we recommend that the courses and standard of study indicated therein should be adopted in future.

Recommendations II—Revised course of study, syllabuses and examinations.

9. Every candidate for the diploma of "Chemist and Druggist" should be required to produce certificates of having attended at least four-fifths of each of the following courses of lectures:—

One course of Botany consisting of not less than 40 meetings.
Two courses of Chemistry, each consisting of not less than 70 meetings.
One course of Practical Chemistry consisting of not less than 3 months.
Two courses of Materia Medica, each consisting of not less than 70 meetings.
One course of Practical Pharmacy and dispensing consisting of not less than 3 months.
One special Laboratory course for Chemists and Druggists consisting of not less than 3 months.

He should also be required to produce a certificate of having satisfactorily served for one year in a chemists and druggists' shop (to be approved by the College Council) at any time after his first year of study.

THE ORDER OF STUDY AND OF EXAMINATIONS RECOMMENDED.

10. It is not proposed to lengthen the present course; two years' study will, we think, be sufficient.

First year.

Winter Session.

Botany ...	...	9 to 10 A.M.
Chemistry	...	2 to 3 P.M.
Materia Medica	...	3 to 4 P.M.

We believe in the efficacy of an examination at the end of each session to stimulate work during that session. The Technical examinations are held in April, *i.e.*, after the Winter session of the college closes, and so we suggest that the student should go up for this examination in April (after his *first* Winter session) *in Botany* (grade—Intermediate as per revised syllabus attached) and *in Inorganic Chemistry* (*in the Elementary grade only*). If he passes these examinations, the student will not be further troubled with Botany; if he does not pass in Botany he should be compelled to take out a second course of lectures in that subject only.

Summer Session.

Practical Chemistry ...	...	2 to 4 P.M.
Practical Pharmacy and Dispensing, &c.	...	11 to 1 P.M.

Second year.

Winter Session.

Chemistry, second course	...	2 to 3 P.M.
Materia Medica, second course	...	3 to 4 P.M.

[Examination in April to pass Inorganic Chemistry and Practical Chemistry up to *Intermediate grade.*]

Winter session or Summer session.

Special laboratory course: three hours a day, thrice a week for three months.

[Final examination in Materia Medica, Practical Pharmacy and Dispensing, and in the Special Laboratory course of instruction.]

11. Hitherto the training has been purely from the teacher's standpoint; but pharmacy has important business features, and so the practical man's standpoint cannot be neglected. In addition to scientific knowledge, it is necessary for the student to acquire the rules of buying and selling and the various business customs. This can only be done by actual service in a shop. We therefore strongly recommend that the student should be compelled to serve for one year in a chemists and druggists' shop to be approved of by the College Council, and that, even though he may have passed all the prescribed examinations, his diploma should be withheld until he is able to produce a certificate from the principal of his shop that he has satisfactorily put in such service. We recommend that he should, if possible, carry out this service during his second year of study, but that it should be left to the option of each candidate to put in his one year in a shop at *any time* after the expiry of his first year of study. We recommend that the candidate after he passes in any or all of the subjects should be awarded the usual single subject certificates, under the Technical examination scheme, for these would probably enable poorer students to obtain some sort of remuneration from their employers during the one year's shop service, his diploma being granted only after such service has been accomplished.

SYLLABUSES accompanying the Report of the Committee on the Courses of Study and Examinations for Chemists and Druggists, and for Compounders.

II.—Expediency of bringing this scheme under the Government Technical Examination Scheme.

12. We do not ourselves see any practical difficulties in the way of bringing this scheme under the Technical Examinations Scheme, and we consider that the status of the chemists' diploma would be raised by doing so, and hence it would probably stimulate entries into this department. We have drawn up the syllabuses in the various subjects keeping the Technical examination scheme in view, and we recommend that the qualifying examinations for Chemists and Druggists be brought under this scheme.

III.—Formation of a separate class for Compounders.

13. The proposals on this subject, as embodied in the papers submitted to us, are—

(1) that there should be a prescribed course of training for compounders, extending over six months which they must undergo provided that they can read and write English and a vernacular;

(2) that this training should take place in the Rayapuram and in the Provincial medical schools, or as an alternative, in major dispensaries;

(3) that there should be a qualifying examination which must be passed before they can be entertained as compounders in any of the hospitals or dispensaries controlled by Government, or by district or municipal boards, and that this examination should be brought under the Technical Examinations Scheme.

14. We have carefully considered these proposals, and we recommend—

(1) that the course of training should extend over at least nine months, and that no one be entertained as a probationer unless he previously satisfies the District Medical Officer that he can read and intelligently write English, and that he is also versed in one vernacular language (preferably that of the district in which he resides and wishes to obtain future employment);

(2) that the training should take place at major dispensaries, and that the District Medical and Sanitary Officer or the Assistant Surgeon should periodically examine the probationer in order to watch his progress. We think that the expense of living at a distance from home would deter candidates from joining classes at Provincial medical schools on the proposed pay of Rs. 5 a month; but that they would most probably enter at the major dispensaries of their own districts, without much inconvenience;

(3) that there should be a qualifying examination, under the Technical Examinations Scheme; but that it should consist only of an oral and a practical examination which should be as thorough as possible and should test the candidates' practical knowledge and manipulative skill in the subjects of the prescribed syllabus. Such an examination may if necessary extend over two days, but it should be a thoroughly searching one, any doubtful candidates being remitted to their studies without further hesitation. This examination should, we consider, be held twice a year; and local examination centres should be fixed, at which candidates could assemble without incurring much expense on travelling.

15. In accordance with these recommendations we have drawn up the following syllabus, and we recommend as a suitable text-book "the Art of Dispensing" published at the "Chemist and Druggist" office, London. Each major dispensary should have a sufficient number of copies of this book so that each probationer might have one—the number will probably not be more than three or four for each such dispensing. The probationer may purchase his own text-book, if he is able to and prefers to do so, otherwise we consider that the gratuitous use of a text-book may be allowed, and that the book should be returned by him to the hospital for the use of his successors.

Chairman.

(Signed) J. L. VanGEYZEL, Surgeon-Major, M.B., F.I.C.,
Professor of Chemistry.

Members.

Absent.
Ag. Professor of Materia Medica.

(Signed) R. HOLLINGSWORTH, Senior Asst. Surgeon,
Asst. Professor of Materia Medica.

Madras,
31*st January* 1896.

Botany.

INTERMEDIATE EXAMINATION.

Chemical Preliminaries.

The composition of air, water, carbonic acid, and ammonia.
The composition of starch, cellulose, sugars, albuminoids.
The most important ingredients of the ash of plants.

Histological Preliminaries.

The structure of the vegetable cell.
The chemical and physical properties of protoplasm.
The nature of the cell-sap, chlorophyll-corpuscles, starch-granules, raphides.
The chemical and physical properties of the cell wall and the mode by which it is thickened.
The mode of growth of tissues.
The distinctive characters of parenchyma, prosenchyma and vascular tissue.

Morphology and Physiology.

Distinction between the axis and its appendages.
The use and structure of roots.
The general structure and special modifications of stems.
The structure and position of buds; vernation.
The different parts of the leaf: stipules, petiole, blade: their special modifications.
The minute structure and use of leaves: fibro-vascular frame-work, intercellular spaces, epidermis, stomata.
The position of the inflorescence and its influence on the mode of branching.
The difference between definite and indefinite inflorescence: the distinctive character of the following kinds; raceme, spike, spadix, corymb, panicle, umbel, head, cyme, glomerule.
The enveloping and essential organs of the flower: æstivation.
The modifications of the flower due to cohesion, adhesion, and suppression of the various parts.
The structure and use of the stamen: filament, anther, pollen.
The structure of the carpel; the placenta.
The structure of the ovule and the changes of position which it undergoes.
Morphological comparison of the leaf, floral envelops, stamens and carpels.
The different forms of fruit: the distinctive characters of the following kinds; achene, nut, drupe, berry, pod, capsule.
The structure of the seed, presence or absence of albumen, position of the embryo, nature of the aril.
The various modes of germination.
The different provisions for the persistence of the individual plant; annuals, biennials, perennials.
The processes of plant nutrition.
The movements of fluids in the plant.
The description in technical language of fresh plants, taking the organs in the following order:—

Root.	Calyx.	Ovule.
Stem.	Corolla.	Fruit.
Leaves.	Stamens.	Seed.
Inflorescence.	Pistil.	Embryo.
Bracts.		

The distinctive characters of the classes dicotyledons and monocotyledons, and of their principal divisions.

The characters (including general properties) of the following natural orders to be recognized upon fresh specimens, [and the distribution to be stated]:—

Papaveraceæ.	Solanaceæ.	Gramineæ.
Cruciferæ.	Labiatæ	Filices.
Malvaceæ.	Euphorbiaceæ.	Rutaceæ.
Leguminosæ.	Coniferæ.	Cucurbitaceæ.
Rosaceæ.		Umbelliferæ.
Myrtaceæ.	Palmaceæ.	Rubiaceæ.
Compositæ.	Liliaceæ.	Asclepiadaceæ.
Apocynaceæ.		

The examination shall comprise—

(1) A written examination—One paper of three hours' duration.

(2) An oral and practical examination.

The distribution of marks and the minima required for passing shall be as follows:—

—	Maxima.	Minima for passing.	
		First class.	Second class.
Written examination	50	..	..
Oral and practical examination	50	30	20
Total ..	100	60	40

Text-books recommended.—First Book of Indian Botany: Oliver, Macmillan. Text-book of Botany: Prantl and Vines. First Lessons in Practical Botany: G. T. Bettany, Macmillan.

GOVERNMENT OF MADRAS TECHNICAL EXAMINATIONS.

Inorganic Chemistry.

Elementary Examination.

Differences between simple and compound substances, and between mechanical mixture and chemical combination. Atoms, atomic weight, atomicity; molecules, molecular weight. Density of gases. Principles of chemical nomenclature. Symbolic notation, formulæ and equations.

Metrical and English weights and measures.

Hydrogen.—Its preparation and properties.

Chlorine.—Its preparation and properties. Hydrochloric acid: its preparation and properties.

Oxygen.—Its preparation and properties. Classification and properties of oxides. Ozone, its preparation, properties, and constitution.

Water.—Its formation, properties, and composition.

Sulphur.—Its properties, occurrence in nature, and allotropic modifications. Sulphuretted hydrogen, its preparation and properties. Oxides of sulphur, modes of preparation, their properties and composition. Sulphurous acids and sulphites. Sulphuric acid, its preparation and properties; the sulphates. Properties common to acids in general.

Nitrogen.—Preparation and properties. Composition, preparation and properties of nitrous and nitric oxides, nitric acid, and ammonia. The atmosphere, its composition; effects of animal and vegetable life upon it.

Carbon.—Its occurrence in nature, its allotropic forms and properties. The two compounds of carbon and oxygen. Carbonates, their composition and properties. Combustion. Indestructibility of matter.

Metals.—Their distinctive characteristics. Chief physical and chemical properties of silver, lead, mercury, copper, zinc, iron, gold, potassium, sodium, and *ammonium*.

The examination shall comprise—

(1) A written examination—One paper of two hours' duration.

(2) An oral examination.

The distribution of marks and the minima required for passing shall be as follows:—

—	Maxima.	Minima for passing.	
		First class.	Second class.
Written examination	70	..	..
Oral examination	30	20	12
Total ..	100	60	40

Intermediate Examination.

Differences between simple and compound substances, and between mechanical mixture and chemical combination. Laws of chemical combination in definite and multiple proportions. The atomic theory; atomic weights of the elements. Molecules and molecular weights: relation between the density of a gas and its molecular weight. Metric and English weights and measures. Relations between the weight, volume, temperature, and pressure of gases. Combination of gases by volume. Atomicity of the elements. Compound radicals.

Symbolic notation, percentage composition, formulæ and equations. Calculation of quantities by weight and by volume. Illustrations and examples of chemical changes and the conditions under which they occur. Nature of acids, bases, and salts. Principles of chemical nomenclature.

Relation between atomic weight and specific heat.

Hydrogen.—Its preparation and properties.

Chlorine, Bromine, Iodine, Fluorine.—Their preparation and properties, also the preparation and properties of their compounds with hydrogen. Experimental methods by which the composition of hydrochloric acid is determined.

Composition and preparation of bleaching powder; and the theory of bleaching. The oxides and oxyacids of chlorine; their preparation, properties, and constitution.

Oxygen.—Its preparation and properties. Classification and properties of oxides.

Ozone, Water, Hydrogen dioxide.—Their preparation, properties, and constitution. Experimental methods of determining the composition of water. Causes of permanent and temporary hardness of water; modes of softening hard waters.

Sulphur.—Its properties, occurrence in nature, and allotropic modifications. The oxides of sulphur, sulphurous and sulphuric acids, sulphuretted hydrogen: their preparation, properties, and constitution.

Nitrogen—Its oxides. Nitric acid and nitrates, ammonia: their preparation properties, and constitution. The atmosphere: simple experimental determinations of its composition by weight and by volume; its relations to animal and vegetable life

Carbon.—Its occurrence in nature; its allotropic forms and properties. Oxides of carbon and carbonic acid: cyanogen, hydrocyanic acid, potassium cyanide, potassium ferrocyanide, potassium fericyanide, oxalic acid; their preparation, properties, and constitution. The chief methods of preparation; the principal properties and the

mutual relations of marsh gas, ethylene, alcohol, alcholyde, acetic acid, ether, spirit for nitrous ether, nitrate of amyl, hydrite of chloral, chloroform, isdoform.

Phosphorus.—Its sources and allotropic modifications. Its hydrides, its oxides, phosphoric acids: their preparation and properties.

Arsenic.—Arseniuretted hydrogen, oxides and chlorides, arsenious and arsenic acids: their preparation and properties. Detection of arsenic.

Boron.—Its occurrence, and allotropic modifications. Boron trioxide, boric acid: their preparation and properties.

Silicon.—Silica, silicic acid, and siliciuretted hydrogen: their preparation and properties. Names and composition of the common (mineral) silicates.

Manufacture on a large scale of the following acids:—Sulphuric, hydrochloric, nitric.

Metals.—Their general, physical, and chemical properties and classification.

The natural sources, modes of extraction, the chief properties and uses of the important metals; also the preparation and uses of the compounds of these metals with the more important acid radicals included above.

The examination shall comprise—

(1) A written examination on the above—One paper of three hours' duration.
(2) An oral examination.
(3) A practical examination of three hours' duration which shall consist in ascertaining the composition by both dry and wet methods of two substances, neither of which shall contain more than a single base and acid, selected from compounds of the following:—Silver, lead, mercury, copper, bismuth, tin, antimony, arsenic, iron, manganese, aluminium, zinc, calcium, strontium, barium, magnesium, potassium, sodium, ammonium, hydrochloric, hydrocyanic, hydrobromic, hydriodic, sulphurous, sulphuric, thiosulphuric, hydrosulphuric, carbonic, phosphoric, chromic, nitric, boric, arsenious, and arsenic acids. The substance given shall be soluble in water or dilute acids.

The distribution of marks and the minima required for passing shall be as follows:—

—	Maxima.	Minima for passing.	
		First class.	Second class.
Written examination .. .. .. 50 }	70	..	..
Oral examination .. .. 20 }	30	22	15
Practical examination			
Total ..	100	60	40

Materia Medica Syllabus.

The recognition of specimens of any crude drug mentioned in the British Pharmacopœia, also of those in the subjoined list; their methods of production and their characteristics so far as may be necessary to detect adulteration or substitution, their geographical sources, the botanical and zoological names of the plants and animals yielding them, the natural orders to which they belong and the localities from which they are obtained; the names of the chief active constituents of drugs, and also the official preparations into which they enter and the doses of these preparations. A knowledge of the proportion of active ingredient or crude material in official preparations containing aconite, antimony, arsenic, belladone, calabar bean, cantharides, hydrate of chloral, chloroform, caustic potash and soda, colchicum, digitalis, elaterium, ergot, iodine, iodoform, ipecacuanha, lead, mercury, nux vomica, opium, phosphorus, scammony, stramonium, squill, alkaloids and alkaloidal salts.

The list referred to above is as follows:—

Roots.

Aconitum feræ.
Aconitum heterophyllum.
Coptis teeta.
Tinospora cordifolia.
Toddalia aculeata.
Abrus precatorius.

Barks.

Azadirachta Indica.
Alstonia scholaris.
Berberis Asiatica (root bark).
Calotropis gigantea (root bark).

Herbs.

Andrographis paniculata.

Leaves.

Tylophora asthmatica.
Datura alba.
Azadirachta Indica.

Fruits.

Hibiscus esculentus.
Mucuna pruricus.
Carum copticum.

Seeds.

Sinapis juncea.
Gynacardia odorata.
Guilandina bonducella.
Pharbitis nil.
Plantago ispaghula.

Juices.

Butea frondosa.
Acacia catechu.

Gum Resins.

Garcinia pictoria.
Boswellia floribunda.

Prescriptions.

To read autograph prescriptions in English as well as the directions for use. To detect errors, discover unusual doses, and to have a general knowledge of posology. To calculate percentages and other quantities occurring in prescriptions.

Practical Dispensing.

To weigh, measure, and compound medicines; write the directions in concise language in a neat and distinct hand; to finish and properly direct each package.

N.B.—The syllabus in Practical Dispensing for compounders will be taken as a guide, and in awarding marks in this subject the time taken by the candidate in doing the work will be taken into account.

The examination shall comprise—

(1) A written examination in materia medica—One paper of two hours' duration.
(2) An oral examination in materia medica.
(3) An oral examination in prescriptions.
(4) A practical examination in dispensing.

The distribution of marks and the minima required for passing shall be as follows:—

—	Maxima.	Minima for passing.	
		First class.	Second class.
Written examination in materia medica 50 }	80	..	..
Oral ,, ,, ... 30 }	20	16	12
Prescriptions	50	40	30
Practical dispensing			
Total ..	150	105	90

Syllabus for Practical Pharmacy Course.

I. Special modes of preparation of the various classes of extracts, and of juices, of infusions and of decoctions; expression, percolation, recovery of risidual liquids from marcs, &c., by presses.

II. The principles of dispensing medicines especially with reference to the best excipients, the best emulsifying agents, and the best means of suspending insoluble substances in liquids.

III. The principles, and a practical knowledge, of the processes by which the following classes of official preparations are made:—

Collodions.	Liniments.	Solutions.
Confections.	Lotions.	Spirits.
Decoctions.	Mixtures.	Suppositories.
Dilute acids.	Ointments.	Syrups.
Extracts.	Pills.	Tinctures.
Glycerines.	Plasters.	Vinegars.
Infusions.	Powders.	Waters.
		Wines.

The examination shall comprise—

(1) An oral examination.

(2) A practical examination, at which the candidate will have to conduct such of the operations, or parts of them, which the Examiner may require.

The distribution of marks and the minima required for passing shall be as follows:—

—	Maxima.	Minima for passing.	
		First class.	Second class.
Oral examination	30	15	10
Practical examination	70	55	45
Total ..	100	70	55

Syllabus for Special Laboratory Course for Chemists and Druggists.

I. To determine specific gravity of solids and liquids; to be familiar with the construction and the use of the thermometer, the barometer and the chemical balance. To have a practical knowledge of the use of the British and the metric weights and measures; of the use of water, steam and sand, baths; of distillation, sublimation, calcination, fusion, evaporation, dessication, disintegration, sifting and of the use of graduated sieves; of filtration, dialysis, solution, and the special use of various menstrua.

[These operations to be illustrated, as far as possible, by their application to processes and methods for the preparation of British Pharmacopœia drugs.]

II. To detect the chief impurities in the common metallic and non-metallic compounds of the British Pharmacopœia, by the tests prescribed therein, to identify by their chemical and physical tests the following—alcohol, acetic acid, chloral hydrate, chloroform, iodoform, ether, tartaric and citric acids, cane and grape sugar, quinine, morphine, and strychnine.

III. To perform the volumetric determinations of the British Pharmacopœia.

IV. To quantitatively determine the total alkaloids in cinchona bark, in the extract of nux vomica, and the morphine in opium.

The examination shall consist of a practical examination extending over two days, from 11 A.M. to 4 P.M., at which each candidate will be required to perform such operations as are set by the Examiners.

Maximum marks.	Minima for passing.	
	First class.	Second class.
100	75	60

Syllabus in Practical Dispensing for Compounders.

1. The equipment of a dispensary.

2. The British and the metric weights and measures; the weights and measures of the Apothecaries' system; the fluid grain, the drop.

3. The British Pharmacopœia, and its uses. The galenical preparations (officinal formulæ) of the British Pharmacopœia and of the Indian Pharmacopœia, the doses of the most important of them, including the doses of all poisonous preparations.

4. The prescription: the label, the distinctive labels of poisons and of drugs for external use, weighing and measuring of liquids and solids. Ability to read any prescription and to explain the order of dispensing it. The importance of not altering, omitting, or introducing substitutes for any part of the prescription without orders from the prescriber.

5. The mixture: how dispensed, the sequence to be observed in mixing certain ingredients; incompatible ingredients sometimes intentional; chemical reaction how avoided in certain mixtures; suspending agents in mixtures containing heavy insoluble salts or resinous tinctures; finishing and wrapping.

6. Emulsions: emulsifying agents; emulsification of special drugs of fixed and volatile oils and of balsams.

7. Draughts and drops: how dispensed.

8. Pills: to be dispensed as small as possible, characteristics of a properly prepared pill, excipients (hard, soft and liquid), special excipients, dusting powders, silvering, gelatine coating and varnishing pills.

9. Powders: essential points in dispensing powders, powders containing volatile or deliquescent salts, and powders for lotions and injections, how dispensed.

10. Aromatic waters: extemporaneous preparation of.

11. Decoctions, infusions: the importance of their being freshly prepared.

12. Suppositories, pessaries and bougies: the necessity of adding wax to certain officinal suppositories.

13. Liniments and pigments: how dispensed.

14. Plasters and blisters, plaster shapes.

15. Ointments: guiding principles in making ointments.

16. Departmental rules regarding the keeping of poisons, the dispensing of liniments and poisonous preparations.

The examination shall comprise—

(1) An oral examination. (2) A practical examination.

The distribution of marks and the minima required for passing shall be as follows:—

—	Maxima.	Minima for passing.	
		First class.	Second class.
Oral examination	25	16	12
Practical examination	75	50	38
Total ..	100	66	50

Enclosures.

From Surgeon-Lieutenant-Colonel W. R. BROWN, M.D., Principal, Medical College, to the Director of Public Instruction, dated 22nd January 1897, No. 300.

With reference to your proceedings, No. 13654, dated 18th December 1896, paragraph 1, I have the honour to resubmit the papers relating to the revision of the course of study for "chemists and druggists" received with your proceedings, No. 6902, dated 2nd July 1896.

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2. I also enclose a letter from the President of the Committee, giving cover to a memorandum containing the information called for in paragraphs 2, 3 and 4 of the latter proceedings above referred to.

3. Two statements also accompany—one showing the numbers admitted into the Chemist and Druggist class since its institution and declared qualified annually, and the other giving particulars, as far as possible, of employment obtained by these men.

From Surgeon-Major J. L. VanGEYZEL, M.B., F.I.C., F.C.S., President of the Committee for revising the course of training, &c., of Chemists and Druggists, to the Principal, Medical College, dated Madras, 31st July 1896.

In reply to your memorandum, No. 595, dated 13th July 1896, I have the honour to forward the accompanying memorandum furnishing the information called for by the Director of Public Instruction in paragraphs 2, 3 and 4 of the Director's proceedings. In doing so the Committee desire to point out that it has nowhere in its report stated that "the several Chemists and Druggists have refused to employ the passed men in their shops in consequence of the defective training, &c.," as stated in paragraph 1 of the Director's proceedings. What it stated with reference to this matter will be found in paragraph 6 of the report, viz., that we were informed that our locally trained men *had been employed in the larger shops and their employment had been in great part abandoned, &c.* This statement was based upon our personal enquiries from employers who had actually employed and dismissed such men on account of inefficiency.

Memorandum (by the Committee appointed to revise the course of training, &c., of Chemists and Druggists) furnishing the information requested in proceedings of the Director of Public Instruction, No. 6902, dated 2nd July 1896.

1. In paragraph 12 of the Committee's report they recommended that the qualifying examinations for Chemists and Druggists students should be brought under the Technical Examination Scheme, and implied thereby that the whole of the qualifying examinations should be carried out under that scheme. They regret that they did not state this clearly. The Committee did not intend that the final examinations in materia medica, pharmacy, &c., should be conducted by the College Board of Examiners, but by Examiners specially appointed as for other subjects under the Technical Examination Scheme.

2. The Committee's proposal that these students should undergo the shop course simultaneously with their second-year's course is quite feasible, and the difficulty referred to in paragraph 3 of the proceedings quoted above is not understood; for, as a matter of fact, there were a few Chemist and Druggist students * who *during the whole of their two years' training* practically carried out this proposal of the Committee. Their spell of shop work was done either in the morning or at night, leaving them free to attend to their work in the college. The hours mentioned in paragraph 10 of our report would not clash with this proposal.

* Messrs. D. Smith, Hyde, Brown, apprentices in Messrs. W. E. Smith & Co.'s establishment.
Mr. Parr in Messrs. Haller & Co.'s establishment.

3. The Committee did not consider it advisable to make any alteration in the fees and it strongly recommends that the existing rates should be allowed to continue for a few years so as to encourage as much as possible entries in this department of the college.

Order—No. 491, Educational, dated 9th August 1898.

The scheme drawn up by the committee for the re-organization of the Chemist and Druggist class in the Medical College and for the training of compounders for service under Government is approved subject to the following modifications and remarks.

2. The Government agrees with the view of the Surgeon-General and the Director of Public Instruction that it is inadvisable to lower the general educational standard of students in the Chemist and Druggist class and cannot, therefore, accept the proposal of the committee to substitute the Lower Secondary examination for the present entrance test. The Director of Public Instruction suggests that the rule might be relaxed in favour of Lower Secondary candidates if in any year there should be no prospect of really eligible candidates, but Government is of opinion that it is undesirable to deviate from the fixed standard, and that, although it is not absolutely necessary to have a class formed, it is essential to ensure that the diploma is attained by qualified men only.

3. The Government approves of the suggestion of the Director of Public Instruction that the Chemical Examiner should propose a reduction from Rs. 50 to Rs. 30 in the special fee to be charged for the chemical laboratory course.

4. With regard to the training of compounders, the suggestion of the Surgeon-General—that the qualifying examination should be held once a year instead of twice as proposed by the committee—is approved.

5. The revised scheme will be published in the *Fort St. George Gazette* and will come into force during the academical year 1899–1900. The Government also directs that after the 1st May 1900, no men should be entertained as compounders who do not possess a certificate of qualification under the new scheme.

6. The Director of Public Instruction will communicate the thanks of Government to the gentlemen who composed the committee by which the revised scheme was drawn up.

(True Extract.)

H. TREMENHEERE,
Secretary to Government.

To the Director of Public Instruction.
" Surgeon-General.
" Superintendent, Government Press.
" Commissioner for Government Examinations.

Rxd. S. J. Pereira.

1

Local & Munl. (1897) Department.

Education 6

CURRENT No. 516

Sanitary

84/93 S ✓ 651/96 S.C. ✓ 1677 L/88 ✓
Med College file 1662 L/89 ✓
992/94 ✓ 45/93 S.C. ✓ 32
810/95 S.C. ✓

Order

From Surgeon-Maj: Genl. C. Sibthorpe. F.R.C.P.I.
Surgeon-Genl. with the Govt. of Madras

No. Tour. / 1

Dated 29th April 1897.

Received 6 MAY. 1897

Registered 6-5-97

Enclosures 17.

Spare copies

SUBJECT.

Transmits letter from the Director of Public Instn. submitting a scheme for the reorganization of the Chemist & Druggist Class in the Medl. College Madras & requests Govt. to sanction the proposals of the Committee ~~regarding~~ appointed to consider the subject of the ~~f~~ training &c. of Compounders for service under Govt.

Sent to press
[illegible]

BACK PAPERS

G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

Circular Memorandum

I have the honor to circulate to the Members of the College Council the accompanying papers regarding the training of Compounders for work in Hospitals and Dispensaries, referred for an expression of their views under endorsement of the Director of Public Instruction No. 5483 8-5-95.

The subject will be brought before the next meeting of the College Council.

10 May 1895

W Grieve
Principal
Med College

Surgeon Lt Col W R Browne MD
" H Allen MD
" A J Shearer MD
Surgeon Majr J Maitland MD
" E W Pope MD
" J L Van Geyzel MD
" J Smyth MD
" R Robertson MD
" C L Williams MD

Circular Memorandum

I have the honor to circulate to the Members of the Medical College Council, the under mentioned papers -

1. Letter from President of the Committee appointed to revise the course of study for Chemists and Druggists, forwarding report of the Committee d/ 31-1-96.
2. Report.
3. Syllabuses.
4. Papers re training of Compounders, referred to the Chemist & Druggist Committee under the College Council Proceedings d/ 15 Novr. 1895.

The subject will be laid before the next meeting of the College Council.

W. R. Browne MD

3-2-96.

Principal M.C.

	Date of Receipt (96)	Date of Return (96)
Brigade Surgn. Lt. Col. A. M. Branfoot M.B.	4.2	4.2
Surgn. Lt. Col. A. J. Sturmer	4	5
Surgn. Major J. Maitland M.D.	4	5
" J. L. Van Geyzel M.B.	24.2.96	24.2.96
" J. Smyth M.D.	8.2.96	8.2.96
Surgn. Capt. R. Robertson M.B.	10-2	10-2
Seen " A. E. Grant M.B.		
" G. G. Giffard	14.2	20.2
Seen " R. H. Elliot M.B.		

Enclos. 4 to C to 5.6 Ell

Tabular Statement showing number of students admitted into the Chemist and Druggist Department, Madras Medical College and who passed out with that Qualification since its institution in 1866.

Session	Number of students admitted	Number under training	Number passed out at end of session	Remarks.
1865-66	1	.	1	
1870-71	1	.	.	
1871-72	1	1	1	
1872-73	1	1	1	
1875-76	1	1	"	
1877-78	1	1	1	
1878-79	1	1	1	
1879-80	9	9	4	
1880-81	3	3	2	
1881-82	9	9	4	
1882-83	7	8	1	
1883-84	3	4	3	
1884-85	6	6	.	
1885-86	7	8	3	
1886-87	1	2	.	
1887-88	1	3	2	
1888-89	1	2	1	
1889-90	2	2	"	
1890-91	4 (1)	5 (1)	2 (1)	
1891-92	7 (4)	9 (4)	4 (2)	
1892-93	15 (9)	18 (9)	3 (1)	
1893-94	10 (10)	13 (10)	4 (2)	
1894-95	10 (10)	10 (10)	1 (1)	
1895-96	1 (1)	1 (1)	1 (1)	
Total	103	117	40.	32 qualified Chemists.

N. B. The figures in red ink above indicate the number of L.M.S. students who having failed at the 1st L.M.S. Examination of the Madras University, took courses in the Chemist & Druggist Department & are included in the figures in black ink.

W. R. Browne

Principal Med College

Enclo. to 9 col c to 516 Edl

	[illegible]				
	H. C. M. Sechina	1882/83 & 83/84	June 84		
33	R. A. Thomas	1882-83	-		Failed in June 83
34	J. Mearchant	do	-		Manager Messrs J. Mearchant & Co. Ootacamund Now Asst. in (Messrs. W. E. Smith & Co. Ootacamund)
35	D. T. Berryman	do	.		Failed in June 83
36	Mrs H. Early	1883-84	.		
37	W. Stokoe	do	June 84		Assistant in Nilgiri Pharmaceutical Company. Ootacamund
38	W. F. Smith	do	do		Partner in Messrs W. E. Smith & Co. Manager Vepery Branch
39	Mahd Ghouse	1884-85	.		
40	V. Gurusawmy Naidu	1884/85 & 1885/86	June 1886		Failed in 85. Manager, Messrs A. L. Butt & Co. Chemist & Druggist Broadway Madras

Sncles to 13 to C to 516 Edl

74	[illegible]amma	1092 [illegible]	[illegible]	[illegible]
75	P. Vijiaratnam	do	-	do
76	M. Manikkam	do	June 95	L. Dis
77	G. S. David	do	.	do
78	M. Jagannadham	do	-	do
79	R. D. O'Dell	do	-	do
80	T. J. Manamalayya	do	-	do
81	V. Krishna Pillay	do	-	do
82	Karunakara Menon	do	-	do

[illegible]clis to 13 to C to 516 Edl

List of students who
institution of the Chemic

No.	Name	
1	Stoney	
2	Ayers	
3	A J O'Hara	
4	H Ch Hunsly	
5	C Hammond	
6	Gomes	
7	F C Boesinger	
8	W S Aldridge	
9	A. Berrymale	
10	W Boesinger	
11	N. Etches	
12	E Grant	
13	H N Johannes	
14	F B Long	
15	G. Barnes	
16	A. Narainsawmy	
17	W D. Smith	
18	J Barnes	
19	A Jeevan Row	
20	A Duckworth	
21	P. Krishnasawmy Chitty	
	Va. Thomas	
	C. C. Theobald	
	V. J. Anstie	
	J. H. Cripps	
	J. Amirthanayagam	
	A Govindram	
	R Dalyarius	
	J B. Lee	
	J a Boone	

No.	Name	Year of training
41	C. Carthy	1884-85
42	H. Austin	do
43	Thirumeyada Naidu	do
44	Miss Godbier	do
45	Govindrow Moodly	1885-86
46	Kolandavelu Pillay	do
47	J. Dorasamy	do
48	V. Thambyah	do
49	J. K. Hyde	1885/86, 86/87 & 87/88
50	H. Rego	1885-86.
51	H. D'Mello	do.
52	G. Browne	1886/87 & 87/88
53	W. Parr	1887/88 & 88/89
54	M. N. Manikasawmy Mudly	1888-89
55	A. C. Andrews	1889/90 & 90/91
56	J. Krishnasawmy	1889-90
57	C. V. Sabasawn	1890-91
58	R. H. Bay	1890/91 & 91/92
59	K. Narain Row	do
60	Miss M Vandermark	1890-91
61	S. Abreo	1891/92 & 92/93
62	S. P. Saldanha	do
63	R. Stocking	do
64	D. Franji	1891-92
65	T. Govindraj Pillai	do
66	E. A Fonseca	do
67	A. Kuriyakadi Moodly	do
68	T. Subba Row	1892-93/93/94
69	J. Murray	1892-93
70	J. D Smith	1892-93 & 93/94
71	T. Venkatasubramaniam	1892-93
72	Miss E. H. Hillis	do
73	A Edward Naig	

Savage & Co. Mount Road Madras

W. K. Browne Esq
Principal Medical College

Year of passing having qualified	Whether L.M.S. student failed at the Exam at the University	
-		Failed in June 83-
June 86		
•		
•		Failed in June 1883
•		Failed in June 86
June 86		Part Proprtr. Messrs Joseph & Co. Chemist & Druggist Coimbatore
•		
•		
June 88		Asstn in Messrs W E Smith & Co Mount Road Madras
•		
•		
June 88		
June 89		Assistant in Messrs. W E Smith & Co. Vepery Branch
-		
June 91		Assistant in branch firm of Messrs. Norton & Co.
•		
June 91	L.M.S	
June 92		Messrs Bay & Co Chemist Poonamallee Road. Manager at—
do		
•		Left college after attending for a short period
-		was excluded from Exam. [illegible] office
June 93		
do		
June 92	L.M.S	
do	do	Proprietor Messrs T. G. Pillay & Co. Mylapore. Madras
•	do	
•	do	
June 94	-	Manager & Proprietor of the Firm of T. Subba Row Chemist. Be[illegible]
•		
June 94	•	Assistant in Messrs Smith & Co. Chemist & Druggist, Coono[illegible]
-		
-		
-		

No.	Name	Year of training	Year of passing having qualified	Whether L.M.S. student failed University Exam.	
83	W. B. Parsons	1893-94	-	L.M.S	
84	C. A. Millett	do	•	do	
85	W. J. McCay	do	-	do	
86	W. L. H. Burns	do	-	do	
87	C. S. Venkatakrishna Row	do	-	do	
88	W. Smith	do	October 94	do	Assistant, Messrs[illegible]
89	T. S. Siddappa	do	•	L.M.S.	
90	P. R. Subba Iyer	do	•	do	
91	T. V. Virasawmy	do	June 94	do	
92	C. Kuppuswamy	do	•	do	
93	T. P. Namberumal Chetty	1894-95	•	do	
94	S. Arumugam	do	•	do	
95	V. S. J. Croley	do	•	do	
96	A. Sivaswami	do	•	do	
97	A. V. Thomas	do	•	do	
98	M. R. Parameswaran Pillai	do	•	do	
99	A. T. Thomas	do	-	do	
100	Solomon Seth	do	-	do	
101	S. N. Moopunar	do	-	do	
102	T. V. Viraswami Naidu	do	-	do	
103	K. I. Cherian Mapilla	do	June 96	do	

Office of Surgeon General
with the Govt: of Madras.

No. 1748. Octacamund, 29th April 1895.

From

Surgeon-Major-General C. Sibthorpe I.M.S.
Surgeon General with the Govt: of Madras.

To

The Director of Public Instruction
Madras

Sir,

I have the honor to attach copies of G.O.
No. 1677 L of the 11th Sept: 1888 and 1662 L of 20th
July 1889 regarding the training of compounders
for work in hospitals and dispensaries.

2. It is very important that this class of hos-
pital attendant should be properly and thoroughly
trained.

3. You will see on page 2 of the first mentioned
G.O. that Surgeon-General Bidie proposed that
probationers for the grade of compounders shou
be trained at a Major Dispensary for a term o
six months and then made to pass a suitable
Examination conducted by the District Surgeon
and his Assistant. This was approved u
para 4 of the second order above quoted.

4. As this class of man is likely to be
shortly wanted in future I think it would be a
good plan if you were to call on the Medic
Council of the College to propose a regula
course of training which could be

in the Royapuram and Provincial Medical Schools at the same time they were undergoing the practical training in the Dispensary of the attached clinical hospital. They should also suggest a text book from which these men should be trained and on which they should be examined.

5. It appears to me that it would be far better if the Examination was arranged for as in the case of the Sanitary Inspectors & that all compounders should in future receive their certificates of qualification under the rules now in force regarding such technical Examinations.

6. If you concur with me and will obtain the information required under paras 4 and 5 of this letter I will address Government through you on the subject and suggest that after the 1st January 1897 no person should be appointed to the post of Compounder who is not possessed of the certificate of having passed the above Examination.

I have &c.
S. J. C. Sibthorpe
Surgeon-Major-General
Surgeon-Genl. with the Govt. of Madras.

(True Copy)

C. Sibthorpe

Surgeon-Major-General
Surgeon-General with the Govt. of Madras

[L. & M. / 86 / 30-11-05]

LOCAL AND MUNICIPAL DEPARTMENT

NOTE FILE.

Notes connected with G.O. No. 490 L&M
2.8.98

Press —
Please show proof early
O.
26.8.07

11

[G. 25] C.27/7 C. 29/7 W
R 28/7 R 30/7

—27-4-98.

.....Educational.....DEPARTMENT.

C. No. 516 of 1897

[Notes connected with G.P. No 491 Edc. of 9.8.98]

~~HIS EXCELLENCY THE GOVERNOR.~~

~~THE HON'BLE SIR HENRY BLISS, K.C.I.E.~~

THE HON'BLE MR. ~~GROSE, C.I.E.~~ Arundel

The Hon. Sir H. Bliss

SUBJECT.

Scheme for the re-organization of the Chemist & Druggist class in the Medical Coll: & the training of Compounders.

FOR ORDERS.

the courses of study

In the above current the S.G. transmits a letter from the D.P.I. submitting a Report of the Committee appointed to review [illegible] of the Chemists and Druggists class in the Medical College, and requests the Govt. to sanction the proposals of the Committee on the subject of the training of compounders for service under Govt.

2. (A) Chemists and Druggists.

The rules for admission into the Chemist and Druggist dept. of the Medl. College, and the curriculum of study are given on p.35 of the Medical College Calendar for 1896-97.

The attention of Govt. was drawn to the unpopularity of the Chemist and Druggist class in the Medical College by the D.P.I. in para. 5 of his proceedings No.8133, dated 31st July 1895, in which he gave a reason for the falling off of the numbers of Chemists and Druggists, and stated that as the Chemist and Druggist class did not meet the

Flag A

purpose for which it was intended, the revision of the curriculum had been entrusted to a special committee consisting of Surgeon Major T.L.Van Geyzel, Surgeon Captain C.L.Williams, and Asst. Surgeon R.Hollingsworth. The objects of this Committee as regards Chemists and Druggists were:-

(1) to revise the course of study and examinations, and

(2) to consider the expediency of bringing their qualifying examinations under the Govt. Technical Examination scheme.

3. In report on the Committee states that the falling off* in the number of Chemists and Druggists may be attributable to two causes:-

(a) The raising of the standard of entrance from the Middle School to the Matriculation examination, and

(b) the absence of a demand for the class of men turned out at present.

4. As regards (a), it may be noted that in G.O.No. 588, Educl., dated 10th September 1886 the Govt. approved of the recommendation of the Medical College Council that Chemist and Druggist students should produce a certificate of having passed the Middle School or any higher examination, but, when the Middle School Examination was abolished, Govt. in G.O. 84, Educl., dated 6th February 1893, ordered that a pass in the Matriculation

Examination

* Statistics showing this falling off are given in para 3 of the Committee's report. During the sessions 95-96, 96-97 there was only one Chem. & Drug. student.

Flag B.

A. p. 17

Flag C

p. 10. Flag E.

The course is pretty stiff. So. 15-20 of Flag E. H.T.

* The D.P.I also points out that the strength of the Hospital assistant class left began to fall off when the standard of admission test was similarly raised to that of the Matriculation Ex. But that the dept has already succeeded in attracting a fair proportion of matriculates.

H.T.

Yes. It would not do to lower the general educational standard of these students.

M.N.

11

2P

Examination, or in the compulsory subjects of the Upper Secondary examination should be the standard of admission. The Committee proposes (recommendation No.1) to lower this standard, and to substitute for the present examination the Lower Secondary, which is the equivalent of the old Middle School examination, which and the Committee considers would be a sufficient preliminary test for the present.

The D.P.I. and the S.G. are, however, against this proposal, on the ground that the Lower Secondary Examination is too low to be the standard of admission to the above class, considering the scientific character of the subjects to be studied, and that the reversion to the old state of things would be a retrograde step. It is submitted that the view of the D.P.I. and S.G. is correct and may be accepted. Considering that the revised course of study proposed by the Committee is to include the additional subjects of Botany and Physics, and that one of the objects of revising the curriculum is to turn out more finished students, it would be inadvisable to admit students with lower general educational qualifications. The D.P.I. adds that though he would make no change in the existing standard, he would be prepared to relax the rule in favour of lower secondary candidates if in any year there should be no prospect of the class being formed through lack of really eligible

candidates, subjecting them at the same time, as is the case at present with native military candidates, to a competitive examination in English composition and dictation. It is to be considered whether such relaxation of the rules is to be allowed. If so, it is [redacted] submitted that the sanction of Govt. would be necessary in any such case.

5. As regards (b) the Committee propose (recommendation No. 2) a revised course of study. The principles on which this recommendation is based are given in para. 7 of their report, and they are, it is submitted, sound. The revised course of study follows the lines indicated in the regulations which govern the qualifications of the Pharmaceutical Society of Great Britain with modifications to suit local circumstances. The subjects are the same with the addition of Botany and Physics. It is also proposed that students shall undergo a special laboratory course, which pending the provision of a pharmaceutical or advanced chemical laboratory at the Medical College, may be taken in the Chemical laboratory of the Chemical Examiner's Office under the immediate guidance and supervision of the two Assistants to the Chemical Examiner.

The above proposals of the Committee have the approval of the D.P.I. and the S.G., and may be accepted.

The D.P.I. also suggests that the Chemical Examiner may be permitted to propose a reduction from Rs.50 to Rs.30

in

H.T.

I don't think this is desirable. Govt. should adhere to the standard it fixes. It is not necessary to have a class formed but it is necessary to make sure that the diploma is obtained by qualified men only.
M.A.

p. 12. Flag E.

Courses
1 of Botany.
2 – Chemistry.
1 " Practical Chemistry
2 " Materia Medica.
1 " Practical Pharmacy.
1 Special Laboratory Course.

The proposals may be accepted. The course however is by no means easy, & it may be some time before applicants come forward for to qualify for this means [illegible]

Yes. many of the students will be poor.
M.A.

H.T.

M.A. H.T.

Flag D

Sanctioned in G.O. No. 1677 L dated 11th Sept. (1886 as amended by G.O. No. 1662 L d. 26th July 1889. Flag F

Flag E p. 14

M.A. 28.7.98 H.T.

Let the Hon. Sir [illegible] Bliss see this

I agree with the Hon. Mr Arundel all through – [illegible]

38

in the special fee to be charged for the special laboratory course. This, it is submitted, may also be approved.

6. With regard to to (2) in para. 2 above, the Committee recommends (No. 3) that [redacted] the revised scheme may be brought under the Technical Examination scheme, and considers that the status of the Chemists' diploma would be raised by doing so, and would probably induce entries into the dept. The recommendation of the Committee on this point which is agreed to by the D.P.I. and the S.G. may also be approved.

7. (B) Compounders.

In para. 5 of his letter No. 422 dated 12th July 1895, the S.G. remarked that he considered that there should be an inferior class for training compounders and a superior class for properly training Chemists and Druggists, and that the present course of training appeared to him to meet neither of these requirements. This suggestion was also referred to the Select Committee for report [redacted].

8. The proposals submitted to the Committee and its recommendations are given in para 13 ff of the report [redacted].

The recommendations of the Committee are approved by the D.P.I. and S.G., but it is suggested by the latter that the qualifying examination should be held once a year instead of twice as suggested by the Committee. With this modification the proposals of the Committee may, it is submitted, be accepted.

ae 25/7/98

H.T. 26.7.98

[G / 24]
0 0 -18-9-97.

EDUCATIONAL DEPARTMENT.

Papers to be read in proceedings :--

Again G.O., No. , dated 189

Again G.O., No. 910 , dated 4th October 1895.

Current No. 516 of 189 7, dated 29th April , from the S.G.

" " " 189 , " , "

" " " 189 , " , "

28

ORDER.

The scheme drawn up by the Committee for the reorganization of the Chemist and Druggist Class in the Medical College and for the training of compounders for service under Government is approved subject to the following modifications and remarks.

2. The Govt. agrees with the view of the S.G. and the D.P.I. that it is inadvisable to lower the general educational standard of students in the Chemist and Druggist Class and cannot, therefore, accept the proposal of the Committee to substitute the Lower Secondary Examination for the present entrance test. The D.P.I. suggests that the rule might be relaxed in favour of Lower Secondary candidates, but Govt. is of opinion that it is undesirable to deviate from the fixed standard, and that, although it is not absolutely necessary to have a class formed, it is essential to ensure that the diploma is attained by qualified men only.

if in any year there should be no prospect of really eligible candidates,

3\. The Govt. approves of the suggestion of the D.P.I. that the Chemical Examiner should propose a reduction in from Rs. 50 to Rs 30 the special fee to be charged for the ~~special~~ Chemical laboratory course.

4\. With regard to the training of Compounders, the suggestion of the S.G. that the qualifying examination should be held once a year instead of twice, as proposed by the Committee, is approved

a.e.
4/8/98

5 ~~4~~. The revised scheme will be published in the Fort St. George Gazette, & will come into force during the academical year 1899-1900. The Govt. also directs that after the 1st May 1899* no men should be entertained as compounders, who do not possess ~~the~~ a certificate of qualification under the new scheme.

Para 5 of the draft [illegible]

Print

note. Please see para 6 of the letter of the S.G. on p. 2 of the Current. The S.G. suggests the 1st May 1899, but if the new scheme only comes into force during 1899-1900, it be necessary to extend the [illegible] for at least a year, if not more.
a.e.

5 ~~6~~. The D.P.I. will communicate the thanks of Govt. to the gentlemen who composed the Committee by which the revised scheme was drawn up. ~~[illegible]~~

note. For a precedent please see para 3 of G.O. 220 of Jany. 1893
a.e. Flag Z.

a.e.
4/8/98

JT
5 8 98

To the D.P.I. } despd. 15-8-98
— S.G.
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