

KANPUR UNIVERSITY AND OTHERS

v.

SAMIR GUPTA AND OTHERS

September 27, 1983

[Y. V. CHANDRACHUD, C. J., R. S. PATHAK
AND SBYASACHI MUKHARJI, JJ.]

Entrance Examinations to courses of study—Multiple Choice Objective-type Tests—Combined Pre-medical Test for admission to medical colleges in U.P. Whether correctness of key-answers to questions set in the examination open to challenge ?

The appellant-University held the "Combined Pre-Medical Test" for admission to the seven medical colleges in U.P. during the year 1982. The pattern of examination adopted was known as the "Multiple Choice Objective-type" test according to which a paper containing 100 questions with four alternative answers for each question was set in each of the four subjects prescribed for the test and the candidates were asked to tick the correct answer from out of the four alternatives given. The marking of answer-book was done by a computer into which had been fed the key-answers supplied by the paper-setters. When the University published the key-answers along with the result of the test, the respondents who had appeared in the test and whose names did not figure in the list of successful candidates filed writ petitions contending that the key-answers published by the University in regard to three questions were wrong, that the answers ticked by them in regard to those three questions were correct and that if their answer-books were reassessed correctly they would be entitled to be admitted to the M.B.B.S. course. The High Court accepted their contention and allowed the petitions.

Council for the University contended that no challenge should be allowed to be made to the correctness of a key-answer unless, on the face of it, it is wrong.

Dismissing the appeals,

HELD : Normally, the key-answer furnished by the paper-setter and accepted by the University as correct, should not be allowed to be challenged. The key-answer should be assumed to be correct unless it is proved to be wrong and it should not be held to be wrong by an inferential process of reasoning or by a process of rationalisation but must be clearly demonstrated to be wrong, that is to say, it must be such as no reasonable body of men well-versed in the particular subject would regard as correct. [81 D, H, 82 A-B]

A In the instant case, the contention of the University is falsified by a large number of acknowledged text-books, which are commonly read by students in U.P. Those text books leave no room for doubt that the answers given by the students are correct and the key-answers are incorrect. Since the matter is beyond the realm of doubt, it would be unfair to penalise the students for not giving an answer which accords with the key-answer, that is to say, with an answer which is demonstrated to be wrong. [82 B-D]

B The publication of the key-answer has unravelled an unhappy state of affairs to which the University and the State Government must find a solution. The State Government should compile under its own auspices a text book which should be prescribed for student desirous of appearing for the Combined Pre-medical Test. A system should be devised for moderating the key-answers furnished by the paper-setters. If English questions have to be translated into Hindi it is not enough to appoint an expert in Hindi language as a translator. The translator must know the meaning of the scientific terminology and the art of translation. In a system of "Multiple Choice Objective-type Test" care must be taken to see that questions having an ambiguous import are not set in the papers. Whenever the attention of the University is drawn to any defect in a key-answer or any ambiguity in a question set in the examination, prompt and timely decision must be taken by the University to declare that the suspect question will be excluded from the paper and no marks assigned to it. [81 F, 82 E, G-H, 83 A-B]

C **D** CIVIL APPELLATE JURISDICTION : Civil Appeal Nos. 4092-4115 of 1983.

E Appeals by Special leave from the Judgment and Order dated the 24th February, 1983 of the Allahabad High Court (Lucknow Bench) in Writ Petition Nos. 4773-74/82, 4827, 5024, 5216, 5314, 5716-5717, 5724, 5816, 5817, 5818, 5819, 5821, 6029, 6067, 6069, 6102, 6103, 6389, of 1982 & 9, 146, 230, 277 of 1983.

F AND

Civil Appeal Nos. 4068 4091 of 1983.

G Appeals by Special leave from the Judgment and Order dated the 24th February, 1983 of the Allahabad High Court (Lucknow Bench) in Civil Mis Writ Petition Nos. 4773, 4827, 5024, 5216, 5314, 5716, 5717, 5724, 5816, 5817, 5818, 5819, 5821, 6029, 6067, 6069, 6102, 6103, 6389 of 1982 and 9, 146, 230, 277 of 1983.

H In Civil Appeal No. 4092 — 4115 of 1983

S.N. Kacker, Mrs. Shobha Dixit and Kulshertha for the Appellants.

R.K. Garg, R.K. Jain, M. Nitin Mohan Popli, Santosh Sethi and Ms. Sangeeta Agarwal for Respondents in CA. 4092 of 1983. A

E.C. Aggarwala Mahavir Singh and K.K. Gupta for Respondents.

Robin Mitra, Anil Kumar Gupta, and Brij Bhushan, for Respondents in CA. 4096 of 1983. B

E.C. Agarwala, Vijay K. Pandita and R. Satish for Respondents.

In Civil Appeal Nos. 4068-91 of 1983 :

Mrs. Shoba Dixit and Kapil Sibal for the Appellants. C

M.M. Kshatriya, E.C. Aggarwala, Robin Mitra, K.K. Gupta, M.B. Lal, Anil Kumar Gupta and Brij Bhushan for the Respondents.

M.M. Kshatriya for Respondent No. 1. D

Mohan Pandey for Respondent.

The Judgment of the Court was delivered

CHANDRACHUD, C.J. These appeals raise a some what awkward question : If a paper-setter commits an error while indicating the correct answer to a question set by him, can the students who answer that question correctly be failed for the reason that though their answer is correct, it does not accord with the answer supplied by the paper-setter to the University as the correct answer ? The answer which the paper-setter supplies to the University as the correct answer is called the 'key answer'. No one can accuse the teacher of not knowing the correct answer to the question set by him. But it seems that, occasionally, not enough care is taken by the teachers to set questions which are free from ambiguity and to supply key answers which are correct beyond reasonable controversy. The keys supplied by the paper-setters in these cases raised more questions than they solved. E
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The respondents in these Appeals applied for admission to the Medical Colleges in the State of Uttar Pradesh. There are 7 Medical Colleges in the State of U.P., to which admission is granted on the basis of the result of a 'Combined Pre-Medical Test' which is held H

A in pursuance of the orders passed by the State Government under section 28 of the U.P. State Universities Act, 1973. The Government nominates one of the Universities in the State for holding the Test every year. In the year 1982, the Kanpur University, the appellant herein, was entrusted with the task of holding the Test. By any standard, it is a stupendous task because. 20,000 applications are received every year for admission to a total number of 779 seats in the 7 Medical Colleges, out of which 50% are reserved seats and the remaining 50% are open. Physics, Chemistry, Zoology and Botany are the four subjects which are prescribed for the Test. One paper is set for each subject and the pattern of the examination is what is called the 'Multiple choice of objective-type test'. For persons belonging to yester generations, this is a new-fangled concept. **B** Hundred questions are set in each paper and four alternative answers are indicated against each question. The candidates are required to tick the correct answer from out of those four. If he ticks the correct answer, he secures 3 marks and if a candidate ticks an incorrect answer, he loses 1 mark. Each paper is of a duration of 3 hours. **C** **D**

So far so good. The snag lies in determining which out of the four suggested answers is the correct answer. That duty is naturally assigned to the paper-setter, who is required to supply to the University the correct answer to each question, called the 'key answer'. The difficulty involved in evaluating a very large number of answer-books is solved by the State Government, quite successfully, by computerising the result. The key answers are fed into a computer and the marking computerised. **E**

The difficulty which arose in these cases is not due to the failure of the computer, which is quite encouraging. The habit of man is to blame the machine. The difficulty arose because the key answers furnished by the paper-setters turned out to be wrong. The students got to know the key answers out of the generosity of the University. If wanted, rightly, to be frank and fair. Therefore, it published the key answers along with the result of the test. Respondents, whose names did not figure in the list of successful candidates, filed writ petitions in the High Court of Allahabad, contending that the answers ticked by them were correct and the key answers wrong. The High Court has accepted their contention and that is how the Kanpur University has come to file these appeals. There cannot be a more telling instance of 'Shishyat Ichhet Parajam' (Wish for defeat **F** **G** **H**

from your pupil). But the *Gurus* contend that the *Shishyas* are wrong and do not deserve to win.

There is no controversy over the questions set in the Physics paper. The controversy arises in regard to three questions, one each in the papers in Chemistry, Zoology and Botany. We will deal with those three questions one by one, without making our own guess as to which is the correct answer. Any way, we cannot indicate the true answer to these appeals by merely ticking off one of the two options open to us, either to allow or to dismiss the appeals. Ticking is the privilege of the new generation of students. We have to give reasons in support of our answer.

Question No. 24 of the Chemistry paper reads thus :

"24. The theory of Electrolytic Dissociation was given by —

1. Faraday
2. Kohlraush
3. Arrhenius
4. Ostwald."

Each question in each paper is set both in English and Hindi, not one below the other but, there are two question papers for each subject, one of which is set in English and the other in Hindi. We do not know which is the original version and which the translation but it is common ground that one is the translation of the other.

The Hindi version of Question No. 24, as transliterated, reads thus :

"Vidyut Apaghatan ka sidhant kis Vegyanik ne diya tha ?

1. Faraday
2. Kohlrausch
3. Arrhenius
4. Ostwald."

A The contention of the University, which accords with the key answer, is that the third alternative furnishes the correct answer, namely, 'Arrehenius', whether the question is read in English or in Hindi. There is no dispute that option No. 3 is the correct answer to the question set in English, that is to say, that the theory of Electrolytic Dissociation was given by Arrehenius. The contention of the students, who are apparently very clever, is that the correct answer to the Hindi version of the question is 'Faraday', which is the first alternative. Their argument is that the English Question No. 24 and Hindi Question No. 24 do not carry the same sense and one is not the exact translation of the other. According to these well-taught students, 'Electrolytic' means 'Vidyut apaghatan', whereas 'Electrolytic Dissociation' means 'Vidyut apaghataniya Vijojan', and in the Hindi version of the question, the word 'Dissociation' does not find its equivalent.

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D With their born knowledge of Hindi, the learned Judges of the Allahabad High Court have gone into the linguistic niceties with some proficiency. Their judgment shows that in Medical Sciences Glossary I, which is published by the Standing Commission for Scientific and Technical Terminology, Ministry of Education, Government of India, the Hindi equivalent of the word 'Electrolysis' is given as 'Vidyut apaghatana' and of the word 'Dissociation' as 'Vijojan'. The High Court has quoted several acknowledged text books in Hindi which show that though the law of 'Electrolysis' was first formulated by Faraday in 1834, the theory of Electrolytic Dissociation was evolved by Arrehenius 1887 which is known as 'Ionic-dissociation Theory'. Amongst the authorities quoted by the High Court is a text-book prescribed for Intermediate classes by the 'Madhyamik Shiksha Parishad, U.P.' The High Court has accepted the respondents' contention that there is a 'marked difference' in the English and Hindi version of question No. 24.

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G The case of the respondents is that they tick-marked the answer to Question No. 24 as it reads in Hindi and not as it reads in English. Whether the respondents read the Hindi question paper or the one in English is incapable of verification and there is no means of contradicting that contention. They had the option to answer the question paper as set in English or in Hindi. There is no reason to disbelieve them when they say that they read the Hindi version. Hindi is the medium of instruction in U.P., until a late

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stage of scholastic education. Besides, the tick-mark, being a symbol, reads the same in English and Hindi.

In support of its contention that the English and Hindi versions of the question convey the same meaning, the University produced the opinion of two experts, Prof. R.P. Singh of the Department of Chemistry, Delhi University, and Dr. B.R. Agarwal, an ex-Vice-Chancellor. These two gentlemen are undoubtedly well-versed in their speciality but the controversy turns more on the knowledge of Hindi than of chemistry. Dr. Agarwal has himself stated in his opinion that : "Even now the Hindi terminology is not so well defined as in English and the Hindi terminology for the same English concepts differs from author to author". In any event, as stated in the judgment of the High Court, the standard text-books which the students consult, or are expected to consult, make a distinction between 'Vidyut apaghatan' on the one hand and 'Vidyut apaghataniya viyojan' on the other. We must, therefore, uphold the finding of the High Court that the key answer to question No. 24 is correct in so far as the English version is concerned but that, the correct answer to the Hindi version of that question is the 1st option, namely, 'Faraday'.

Coming next to the Zoology paper, Question No. 23 reads thus :

"23. Which one of the following was not present in free form at the time life originated ?

1. Hydrozen
2. Oxygen
3. Water
4. Ammonia"

Whereas the students assert that the 2nd alternative, namely, 'Oxygen' furnishes the correct answer to the question, the key answer shows that the correct answer is 'Ammonia'. Here again, as pointed out by the High Court, the standard text-books shows that 'Oxygen' was not present in free form at the time when life originated. The famous book on Biology by Claude A. Villas, while dealing with the subject 'The Origin of Life', says : "Most authorities now agree that the earth was very hot and molten when it was first formed and

A that conditions consistent with life appeared on the earth only perhaps three billion years ago". Two authors of international repute, Tracy I. Storer and Rober L. Usinger, say in their book "General Zoology" that "At some time more than a billion years ago temperature and moisture conditions became suitable for life. There was no free oxygen, but the atmosphere contained methane, ammonia, hydrogen and water vapor". Two Indian authors, Dr. B Ramesh Gupta and Virbala Rastogi, have expressed the same view in their respective books 'Aadhunik Jantu Vigyan' and 'Madhyamik Jantu Vigyan'.

C The University produced the opinion of Shri H. S. Vishnoi of the Department of Zoology, University of Delhi. We agree with the High Court that though Shri Vishnoi is a knowledgeable person in his speciality, he was evidently under some confusion while giving his opinion. Profundity sometimes creates confusion. In the very opening sentence of his opinion, Shri Vishnoi says: "The point is about free ammonia". That is not the point. The question which D the students were asked to answer was not "about free ammonia" but which of the four alternatives was not present in free form when life originated. Shri Vishnoi has also not given specific citations from the two books to which he has referred in support of his opinion. We therefore agree with the conclusion of the High Court E that the answer to question No. 23 in the Zoology paper is 'oxygen' as contended for by the respondents and not 'Ammonia' as stated in the key answer.

F Question No. 66 in the Botany paper has an interesting story of its own. That question reads as follows :

"66. The net gain of A.T.P. Molecules in Glycolysis is :

(1) 0

(2) 2

(3) 4

(4) 8"

H Whereas the students contended that the 2nd alternative furnishes the correct answer, the key answer which was fed to the computer

was alternative No. 4. Here also, the various text-books cited by the students tend to show that the key answer fed into the computer was not the correct answer. The High Court has copiously referred to the standard text-books on the subject. We need not do so since, the more interesting part of this controversy is the expert opinion of Shri Arya Bhushan Gupta which was filed by the University in the High Court. According to that opinion, the correct answer to Question No. 66 is neither the 2nd option nor the 4th but the 3rd. In other words, according to Shri Gupta, the net gain of A.T.P. molecules in Glycolysis is neither 2 as contended by the students, nor 8 as mentioned in the key answer but 4 which is nobody's case except the expert's. Thus, the case of the University is demolished by its own expert. In these circumstances, we cannot find fault with the High Court for holding that the key answer is not the correct answer to Question No. 66.

The findings of the High Court raise a question of great importance to the student community. Normally, one would be inclined to the view, especially if one has been a paper setter and an examiner, that the key answer furnished by the paper setter and accepted by the University as correct, should not be allowed to be challenged. One way of achieving it is not to publish the key answer at all. If the University had not published the key answer along with the result of the test, no controversy would have arisen in this case. But that is not a correct way of looking at these matters which involve the future of hundreds of students who are aspirants for admission to professional courses. If the key answer were kept secret in this case, the remedy would have been worse than the disease because, so many students would have had to suffer the injustice in silence. The publication of the key answer has unravelled an unhappy state of affairs to which the University and the State Government must find a solution. Their sense of fairness in publishing the key answer has given them an opportunity to have a closer look at the system of examinations which they conduct. What has failed is not the computer but the human system.

Shri Kacker, who appears on behalf of the University, contended that no challenge should be allowed to be made to the correctness of a key answer unless, on the face of it, it is wrong. We agree that the key-answer should be assumed to be correct unless it is proved to be wrong and that it should not be held to be wrong

A by an inferential process of reasoning or by a process of rationalisation. It must be clearly demonstrated to be wrong, that is to say, it must be such as no reasonable body of men well-versed in the particular subject would regard as correct. The contention of the University is falsified in this case by a large number of acknowledged text-books, which are commonly read by students in U.P. Those text-books leave no room for doubt that the answer given by the students is correct and the key answer is incorrect.

C Students who have passed their Intermediate Board Examination are eligible to appear for the entrance Test for admission to the Medical Colleges in U.P. Certain books are prescribed for the Intermediate Board Examination and such knowledge of the subjects as the students have is derived from what is contained in those text-books. Those text-books support the case of the students fully. If this were a case of doubt, we would have unquestionably preferred the key answer. But if the matter is beyond the realm of doubt, it would be unfair to penalise the students for not giving an answer which accords with the key answer, that is to say, with an answer which is demonstrated to be wrong.

E If the State Government wants to avoid a recurrence of such lapses, it should compile under its own auspices a text-book which should be prescribed for students desirous of appearing for the combined Pre-Medical Test. Education has more than its fair share of politics, which is the bane of our Universities. Numerous problems are bound to arise in the compilation of such a text-book for, various applicants will come forward for doing the job and forces and counter-forces will wage a battle on the question as to who should be commissioned to do the work. If the State can succeed in overcoming those difficulties, the argument will not be open to the students that the answer contained in the text-book which is prescribed for the test is not the correct answer. Secondly, a system should be devised by the State Government for moderating the key answers furnished by the paper setters. Thirdly, if English questions have to be translated into Hindi, it is not enough to appoint an expert in the Hindi language as a translator. The translator must know the meaning of the scientific terminology and the art of translation. Fourthly, in a system of 'Multiple Choice Objective-type test', care must be taken to see that questions having an ambiguous import are not set in the papers. That kind of system of examination involves merely the tick-marking of the correct answer. It

leaves no scope for reasoning or argument. The answer is 'yes' or 'no'. That is why the questions have to be clear and unequivocal. Lastly, if the attention of the University is drawn to any defect in a key answer or any ambiguity in a question set in the examination, prompt and timely decision must be taken by the University to declare that the suspect question will be excluded from the paper and no marks assigned to it.

There was some argument before us as to the nature of the relief which can be granted to the respondents. It was contended by Smt. Dixit, who appears on behalf of the State of U.P., that six of the respondents have been already admitted to the B.D.S. Course and, therefore, they should not now be admitted to the M.B.B.S. course. We cannot accept this submission since, those students sought admission to the Dental course only because they were not admitted to the M.B.B.S. course. And they were denied admission to the M.B.B.S. course wrongly.

Twenty-seven students in all were concerned with these proceedings, out of whom 8 were admitted to the B.D.S. course, 3 were admitted to the M.B.B.S. course last year itself in place of the students who dropped out and 5 have succeeded in getting admission this year. Omitting 8 of the respondents who have been already admitted to the M.B.B.S. course, the remaining 19 shall have to be given admission as directed by the High Court. If the key answer was not wrong as it has turned out to be, they would have succeeded in getting admission. In view of the findings of the High Court, the question naturally arose as to how the marks were to be allotted to the respondents for the three questions answered by them and which were wrongly assessed by the University. The High Court has held that the respondents would be entitled to be given 3 marks for each of the questions correctly ticked by them, and in addition they would be entitled to 1 mark for those very questions, since 1 mark was deducted from their total for each of the questions wrongly answered by them. Putting it briefly, such of the respondents as are found to have attempted the three questions or any of them would be entitled to an addition of 4 marks per question. If the answer-books are reassessed in accordance with this formula, the respondents would be entitled to be admitted to the M.B.B.S. course, about which there is no dispute. Accordingly, we confirm the directions given by the High Court in regard to the reassessment of the particular questions and the admission of the respondents to the M.B.B.S. course.

A There is one student, Miss Reeta Gupta, whose grievance is that if she is given additional marks as directed by the High Court, her place will go higher up in the merit list, as a consequence whereof she would be eligible for admission to the Medical College situated in her place of residence. Smt. Dixit says that Miss Gupta should apply to the Government in this behalf and the Government could consider her application. We do not think that there is any justification for us to interfere with the order passed by the High Court on this score also.

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C We understand that some petitions are pending in the High Court on these very points. Those petitions will be disposed of by the High Court in the light of this judgment, provided that the petitioners therein make out a case for interference as the students in these appeals have done. We however, direct that no fresh petitions should be entertained by the High Court and, of course, none will be entertained by us hereafter on the questions involved in these appeals arising out of the test which was held in 1982. The new academic session is due to commence within the next few days and these questions cannot be allowed to be raised in a leisurely fashion so as to disorganise the scheme of fresh admissions.

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E In the result, these appeals are dismissed with costs.

H.L.C.

Appeals dismissed.