illustrated a sample analysis of ten questions. Results of these showed an average relevance (precision) of 52.7 per cent. The size of this figure is not as important in current literature alerting as in retrospective information retrieval. It is in fact not desirable to have too narrow a field for current awareness—there should be room for “idea stimulating” information, developments in neighbouring fields, and so on. The general relevance level of the references responded to (about 75 per cent) is 20 to 30 per cent, the average level for a question being about 35 per cent.

Other “literature on tape” services were also discussed at the meeting. Both Mr Corbett and Mr Gallagher spoke of the effects of SDI on the research staff, who certainly want it and like it. Given a regular service, they show a tendency to alter and improve their “literature-use” habits individually and as “teams”; this also applies to research/information staff communications.

Defence Research

THERE was a mood of intense self-questioning in Britain about the national investment in research and development, Professor P. M. S. Blackett told the Select Committee on Science and Technology on March 14. The dominant feeling was that the investment had not been wisely made; despite expenditures much greater than those in other countries, Britain's growth rate was slow. But Professor Blackett was optimistic that now there was intense activity, centred on the Ministry of Technology, which would help to change all this. The most important thing, he thought, was to persuade more scientifically qualified people to go into management—engineers were particularly important. “Historically we have failed to match management with technology,” he said.

Although the committee is launched on an investigation of the defence research establishments, it made little progress towards its objective in this session. Professor Blackett's recent experience as an adviser to the Ministry of Technology and the cogent memorandum which he presented to the committee were both in the civil rather than the military field. Often he frankly admitted that the questions were outside his competence. In consequence, the session was spent in discussion of rather generalized notions of how Britain's economic performance could be improved. Briefly, this meant a discussion of the twin doctrines of size and selectivity.

In his memorandum, Professor Blackett provided a compelling argument in favour of large firms. Since few firms can afford to spend more than 5 per cent of their turnover on research and development, it followed that a firm's turnover must be at least twenty times its research expenditure. It was worthless to employ less than about five to ten qualified scientists and engineers, each of whom cost £10,000 a year to keep going. For a team of ten scientists, then, the firm must have a turnover of £2,000,000 a year. Without this, it would be unlikely to survive for long in a rapidly advancing technology, although if it were exceptionally lucky it might get along for a little while. As for selectivity, Professor Blackett said that it was inescapable, because Britain had reached the limit of what could be done by broad fiscal means. If the work of government laboratories was to be used, it had to be

offered to one firm on the basis of exclusivity, or perhaps to two firms. If the results were thrown open to all, nobody took them up, he said.

Conservative members expressed some anxiety about this approach. Sir Ian Orr-Ewing suggested that civil servants were not sufficiently well-equipped to make decisions of this sort. Professor Blackett denied that the National Research Development Corporation or the Industrial Reorganization Corporation were part of the civil service. As for the Ministry of Technology, there was a new section, concerned with industry, which he thought was well able to make these decisions. And government purchasing power should also be more widely used as a selective mechanism. It might be necessary to look at the whole company structure—exports, research and development structure, and the like—before awarding contracts. This would mean that the Government would not always accept the lowest price offered.

Parliament in Britain

by our Parliamentary Correspondent

Fuel Policy

MR ARTHUR PALMER and Sir Harry Legge-Bourke, both members of the Select Committee on Science and Technology, pressed the Minister of Power to make clear his policy on fuel. Mr Palmer suggested that there were as many fuel policies as there were chairmen of nationalized industries, but Mr Marsh, Minister of Power, denied this. He said that the Government's policy was not in conflict with the report of the select committee on the nuclear power industry in Britain, and that he and the Minister of Technology were both discussing this “large and important” document. They hoped to come to Parliament soon with their conclusions.

High Temperature Reactors

MR R. FREESON, for the Ministry of Power, refused a request from Mr Eric Lubbock that he should direct the Central Electricity Generating Board to seek tenders for high temperature reactors for future power stations. Mr Freeson said it was not a matter in which a general directive was appropriate. Mr Lubbock asked sharply whether Mr Freeson was aware that the tender for the Hartlepool power station by the Nuclear Power Group, using a high temperature reactor, was several million pounds cheaper than the next quotation. Was he also aware that electrical utilities in the United States published all details of tenders? Mr Freeson said that these were matters for the CEBG.

Dainton Report

MR PATRICK GORDON WALKER, Secretary of State for Education and Science, refused to be drawn on the subject of the Dainton report. Mr Christopher Price, who asked the minister for a statement, wanted to know if he agreed that all children should study mathematics until they left school. If so, he asked, where were the mathematics teachers to come from? Mr Gordon Walker said that most of the recommendations of the report were directed at local authorities, universities and schools, and he did not think that he was yet called on to give a view. But he said that he was having consultations with various bodies and associations concerned, and was gratified that “there has been a general acceptance that the swing away from science is wrong, and should be reversed”. He would, he said, make a statement in due course.