фронтальный устный опрос лексики на занятиях; проверка письменных лексических и грамматических заданий и упражнений преподавателем / студентами; устная проверка домашних заданий на занятиях; проверка заданий в тетрадях; контрольная работа/тест; самостоятельная работа в аудитории по теме «Technology of Integrated Circuits Manufacture» с последующей проверкой; проверка письменных работ по переводу/реферированию текстов; ответы на вопросы преподавателя по пройденному материалу; контрольный устный (письменный) перевод текста на занятиях; контрольное чтение вслух текста-образца; саse study по теме «Переговоры. Устройство на работу»;

обсуждение событий мирового значения (из источников Mass Media)

Владимирский Государственный Университет им. А.Г. и Н.Г. Столетовых

Методические указания к практическим занятиям аспирантов и соискателей по английскому языку

Владимир

PART 1. TEXT READING AND DISCUSSION.

In the first part of these teaching materials you will get an opportunity to know of some aspects of higher technical education and research in British and American universities. The questions that follow the texts will stimulate your discussions in class and your comments on the problems outlined in the texts. Special attention is paid to enriching your individual vocabulary.

Text A. RESEARCH AND POSTGRADUATE COURSES AT BRITISH UNIVERSITIES Read the text and answer the questions that follow

There are forty-four universities in Great Britain, not counting the Open University.¹ The universities of Oxford and Cambridge date from the twelfth end thirteenth centuries and the Scottish universities of Glasgow, Aberdeen and Edinburgh from the fifteenth and sixteenth centuries. All the other universities were founded in the nineteenth or twentieth centuries.

There are five other institutions where the work is of university standard. These are the University of Manchester Institute of Science and Technology, the Cranfield Institute of Technology for postgraduate work in aeronautics and other subjects, the Royal College of Arts and two postgraduate school which are supported jointly by Government and industry - the Manchester Business School associated with the London School of Economics and the Imperial College of Science and Technology.

The University of Kent at Canterbury is a modern university which has a place of distinction in the international academic community and is famous for its diversified postgraduate research programmes.

The quality of teaching at postgraduate level at Kent is maintained by the scholarship and research achievements of its academic staff, many of whom are leading authorities in their fields. The University's research programmes, many of which involve collaboration with scholars from Europe and North America, receive substantial financial support worth several millions of pounds each year from Research Councils in the United Kingdom, from British and overseas government departments, from industry and from charitable institutions. The University's annual research output is substantial, with some fifty books and over five hundred learned articles being published each year.

The well-equipped biological, chemical, computing, electronic engineering and physics laboratories have teams involved in a variety of topical and innovative areas of research. They range from optic fiber sensors to medical electronics, from co-ordination chemistry and catalysis to computer networks, from anaerobic bacteria to space science, from gene-cloning to satellite communications and from functional programming to condensed matter physics. Such research involve fundamental studies of a speculative nature and applied research and development which encourages liaison with industry.

Research in the University benefits greatly from the participation of visiting academics who are attracted from all over the world through conferences and symposia organized by the University to promote and develop recent work in areas of special interest.

Excellent facilities are available for postgraduate study leading to the degree of MA, MSc, MPhil, PhD. The degrees of MA and MSc can be taken either by supervised research in any of the forty subject areas, including computer science, computing and social statistics, economics and social statistics, management science and others, or they can in some subjects be taken by following an advanced course which may involve a dissertation. The degrees of MPhil and PhD are primarily

¹ The Open University of Great Britain instructs its students through radio and TV lectures arranged by the BBC, through correspondence courses and by organising summer classes throughout the country. There are no entrance examinations to the Open University. It was set up in 1971 and has about 55000 students from all walks of life.

research degrees which include the preparation of a thesis.

Oversees students are required to produce evidence of their proficiency in written and spoken English. Examples are the Test of English as a Foreign Language (TOEFL) administered by Prinston University and the English Language Test Service (ELTS) administered by the British Council. The University also provides assistance to overseas students who wish to improve their written and spoken English. To those admitted to postgraduate degrees and diplomas they will also assist with technical vocabulary of the particular subjects.

Comprehension questions.

- 1. How many universities are there in Great Britain?
- 2. What educational centers give university education?
- 3. What ensures high quality of teaching at postgraduate level at the University of Kent?
- 4. What are the main sources of financial support for the University's research programme?
- 5. Can you prove that the University's annual research output is substantial?
- 6. What are the main areas of research carried out at the University?
- 7. Do you know what the abbreviations MA, MSc, MPhil, PhD, BA, BSc, TOEFL and ELTS stand for?
- 8. What are the subject areas in which the degrees of MA and MSc can be taken?

Text analysis and discussion.

- 1. Compile a list of words you find difficult to pronounce.
- 2. Practice the reading of the following words. Mind their pronunciation and stress pattern:
- university, Cambridge, Glasgow, Edinburgh, Aberdeen, Manchester, technology, postgraduate, industry, economics, aeronautics, Canterbury, Europe, academic, community, diversified, programme, scholarship, achievement, evidence, satisfactory, proficiency, assistance, vocabulary, authority, substantial, financial, council, department, charitable, institution, well-equipped, biological, chemical, laboratory, computing, fibre, catalysis, communication, speculative, encourage, symposia, excellent, facilities, thesis, supervise, management, dissertation.
- 3. Read the following derivational clusters of words. Consult the dictionary where necessary for their meaning and pronunciation. Note the stress shift in some cases:

industry - industrial economy - economics - economist. Europe -European.

academy - academic - academician, diversify - diversified - diversification, programme - programming - programmer, assist - assistance, scholar - scholarship, achieve - achievement, finance-financial, substance - substantial, charity - charitable-, biology -biological, chemistry - chemical, compute - computing - computer, supervise - supervisor - supervision, improve - improvement, require - requirement, satisfy - satisfaction - satisfactory.

- 4. Look through the text again and give Russian equivalents to the following:
 - the university is supported jointly by industry and Government;
 - postgraduate programmes in computing and social statistics;
 - the university has a distinctive place in the academic community;
 - the university is famous for its diversified research in many specialist fields;
 - the university's annual research output is substantial, a learned article, topical and novel areas of fundamental studies and applied research;
 - conferences and symposia are held to promote recent work in areas of special interest, excellent facilities are available for postgraduate study;
 - postgraduate students undertake supervised research in one of the subject areas;
 - to take an advanced course involving a dissertation.

- 5. Now draw up your own list of words and word combinations that will help you talk about the text.
- 6. Read the questions given below and use them as the basis for discussion in your group or for individual comments on the problems outlined here. If necessary refer to the text again.
 - 1) What is the difference between the Open University and other universities in Great Britain? Decide on the advantages and disadvantages of different forms of higher education.
 - 2) Why do you think new institutions of university standard have appeared in Great Britain? What is the main orientation of their academic instruction and research?
 - 3) What makes it possible for the University of Kent to provide a high standard of postgraduate teaching? Do you remember any facts from the text that prove it?
 - 4) Could you comment on some forms of collaboration between the University, industry and the government?
 - 5) What are the new areas of research carried out at the University of Kent?
 - 6) Given the list of the major fields of investigation, could you comment briefly on the scope of scientific interests of the University's staff?
 - 7) Why are overseas students required to produce evidence of their proficiency in English? Why does the University provide particular assistance to those admitted to postgraduate degrees and diplomats?

Text B. SOME ASPECTS OF HIGHER EDUCATION IN THE USA

Read the text and answer the questions that follow

The administration of higher education is the responsibility of both staff and faculty, with some work divided between these two groups. The first group of officials and clerical personnel are responsible for the non-academic functions of the institution. Their role is not instructional but one of organization, classification and financial management. The members of the university's community who are involved in instruction and research are called faculty members.

The highest award to a university student is the degree of PhD (Doctor of Philosophy), although that of a MA (Master of Arts) is obtainable in less time and on easier terms. The minimum period of study for the degree of PhD is two years after the student has achieved the bachelor's degree, though in practice three or even four years of study are found to be necessary. In addition to carrying on investigation in the field of the main subject, the candidate for the degree of PhD is usually required to pass examinations in one or two subordinate subjects, to have a reading knowledge of French and German (often Latin as well) and to submit - usually in printed form - the dissertation which embodies the results of the research.

The University - level instruction, though found elsewhere, is given chiefly at the following institutions: California University, Catholic University of America, Cornell University, Harvard University, John Hopkins University, Stanford University, Wisconsin University, Yale University and some others.

The method of instruction in these universities is lecture discussion and practical work in laboratory or seminary. The degree of Master of Arts is conferred upon students who, after one year of university residence and study, pass the prescribed examination. This degree, like those of DD (Doctor of Divinity) and LD (Doctor of Laws) is often conferred by colleges and universities as a purely honorary distinction.

Comprehension questions

- 1. What are the different roles of the staff and faculty members of American universities?
- 2. What course of study is necessary to obtain the degree of PhD?
- 3. What are the main centers of university education in the USA?
- 4. What are the principal methods of instruction in American universities?

Text analysis and discussion

- 1. Compile a list of words you find difficult to pronounce.
- 2. Practice the reading of the following words. Mind their pronunciation and stress pattern: administration, responsibility, official, personnel, institution, instruction, management, honour, obtain, obtainable, bachelor, investigation, candidate, necessary, examination, require,subordinate, knowledge, dissertation, California, Catholic, Harvard, Stanford, Yale.
- Read the following derivational clusters of words. Consult the dictionary where necessary for their meaning end pronunciation. Note the stress shift in some cases: obtain - obtainable, responsibility - responsible, personal - personnel, investigate - investigation, investigator, necessary - necessity, require - requirement, subordinate(adj.) - subordinate (v.) subordination, submit - submission.
- 4. Look through the text again and give Russian equivalents to the following:
 - to obtain a degree;
 - a candidate for the degree of PhD;
 - to possess a reading knowledge of French and German;
 - to submit a dissertation;
 - the dissertation embodies the results of the research;
 - the degree of Master is conferred upon students after a year of university residence and study;
- 5. Now draw up your own list of words and word combinations that will help you speak on the text.
- 6. Read the questions given below and use them as the basis for discussion in your group or for individual comment on the problems outlined here. If necessary refer to the text again.
 - 1) What period of study is required for those who seek the degree of PhD?
 - 2) Why do you think the real period of time necessary to fulfill the programme of studies and research at the doctoral level is longer than two years?

Text C. DEPARTMENT OF ELECTRICAL ENGINEERING. UNC CHARLOTTE

Read the text and answer the questions that follow

The University of North Carolina at Charlotte is a major state university and has about 13.000 students. It is one of the four largest universities in North Carolina and offers the opportunities of a comprehensive university. UNC Charlotte is part of the greater University City area which includes the University Memorial Hospital, a "new town" development and a research park of high-tech companies.

The city of Charlotte, located in the Southern Piedmont of North Carolina, is one of the largest growing urban centers in America and is proud of cultural and educational opportunities it offers.

Electrical engineering is the application of scientific principles to the development and improvement of electrical technology for the benefit of the individual and society. Electrical engineers are involved in:

- research and development,

- design and testing of new products,
- economic manufacturing technology,
- communications,
- analysis and control systems.

The electrical engineering profession is creative and forward-looking and plays a key role in the development and implementation of new technologies, including optoelectronics, bio-engineering, robotics and computer science.

The electrical engineering curriculum at UNC Charlotte provides students with a basis of scientific and engineering principles, the ability to solve engineering problems, the opportunity to develop communication skills and the stimulus for independent thinking, all of which prepare the student for the challenges of the evolving technological world.

The electrical engineering department offers the Bachelor of Science in Electrical Engineering (BSEE) degree. This is an eight-semester sequence of courses with a strong base in mathematics and science and emphasis is made on electromagnetic device phenomena and processing circuits and systems. The last two semesters provide options in power engineering, microelectronic and optoelectronics, computer engineering and communication. The courses are designed to develop conceptual thinking, analytical methods and design fundamentals in all areas. Computer technology is used throughout the curriculum.

Graduate studies in microelectronics, optoelectronics, microfabrication, communication system control and power and computer engineering are offered at both the master and doctoral level.

The electrical engineering department participates in the UNC Charlotte engineering Co-op Plan, where more gifted students can spend three semesters doing paid engineering work at selected companies, alternating these with normal academic semesters. This usually results in the BSEE degree being achieved in five years and includes more than a year of valuable professional experience.

The electrical engineering department has state-of-the-art laboratories. A complete silicon integrated circuit micro-fabrication facility is available to students as well as CAD, mask-making, lithography with two micron design rules and all etching and thermal annealing instrumentation. A complete measurements laboratory for microelectronics is also available.

The department offers extensive computer-aided design and analysis of circuits and control systems.

Access to extensive analytic instrumentation facilities and summer employment is possible at the Microelectronics Centre of North Caroline (MCNC) through the UNC Charlotte faculty.

The J.Murrey Atkins Library houses an open-shelf collection which includes over 420.000 bound volumes, 850.000 units in microforms and approximately 750.000 manuscripts in closed stacks. An on-line catalogue provides access to a substantial portion of the collection. The InterlibraryLoan scheme provides access to materials not contained in the library's collection.

Comprehension questions

- 1. How big is the University of North Carolina at Charlotte?
- 2. Where is the University situated?
- 3. Is there a department of electrical engineering at the UNC Charlotte?
- 4. What are the main areas of research and manufacturing that electrical engineers are involved in?
- 5. What is the BSEE decree? How long does it take a student to obtain it?
- 6. How is practical experience incorporated into academic study?
- 7. What kind of graduate study programmes does the department of electrical engineering offer?
- 8. What do you think the term "Engineering Co-op Plan" means?

- 9. Can you explain how the electrical engineering department provides up-to-date laboratory facilities for research and academic studies?
- 10. How well stocked is the J.Murrey Atkins Library?

Text analysis end discussion

- 1. Compile a list of words you find difficult to pronounce.
- 2. Practice the reading of the following words. Mind their pronunciation and stress pattern:
 - Carolina, major, opportunity, comprehensive, urban, diversity, educational, engineering, applicant, scientific, improvement, technology, design, manufacturing, analysis, control, robotics, career, society, bioengineering, curriculum, scientific, ability, stimulus, challenge, sequence, course, mathematics, emphasize, power, microelectronics, concept, analytical, area, semester, valuable, experience, professional, laboratory, facilities, integrated, microfabrication, circuit, silicon, available, measurement, extensive, computer-aided, access, employment, approximately, manuscript, substantial.
- 3. Read the following derivational clusters of words. Consult the dictionary where necessary for their meaning and pronunciation. Note the stress shift in some cases:

comprehensive - comprehension, diversify - diversification - diversified, education - educational, electrical - electricity, engineer - engineering, apply - application - applicant, science - scientific - scientist, improve - improvement, technical - technology - technological, manufacture - manufacturing, analyse - analysis, industry - industrial, emphasize - emphasis, participate - participation - participant, alternate - alternation - alternative, value - valuable, profession - professional.

- 4. Look through the text again and give Russian equivalents to the following:
 - economic manufacturing technology,
 - the electrical engineering profession plays a key role in the development and implementation of new technologies,
 - scientific and engineering fundamentals,
 - valuable professional experience,
 - up-to-date laboratory facilities are available,
 - the catalogue provides access to a substantial part of the library's collection.
- 5. Now draw up your own list of words and word combinations that will help you talk about the text.
- 6. Read the questions given below and use them as the basis for discussion in your group or for individual comments on the problems outlined here. If necessary refer to the text again.
 - 1) Is your special field of research connected in any way with electrical engineering? Do you think that the interpretation of the term "electrical engineering" is broader than that of the corresponding Russian term?
 - 2) Why do you think the opportunities to develop communication skills, the ability to solve engineering problems and the stimulus for independent thinking are among the priorities of university instruction at the electrical engineering department, UNC Charlotte?
 - 3) What is the basic underlying idea of the Engineering Co-op Plan? Can you give any analogous examples of similar projects in Russian higher education?

PART 2. COMMUNICATION ACTIVITY

Below is a list of questions to answer. The questions on your research work are grouped into four units. Each unit is supplied with a suggested vocabulary that will help you speak on your scientific

activity. Study the vocabulary and if necessary ask your teacher for explanations and comment. Pay attention to the "Notes" at the end of each unit; the conversational phrases included here will make your speech more natural and persuasive.

UNIT 1. Educational background. Special field of research.

Postgraduate courses

- Suggested vocabulary
- 1. a postgraduate course
- a postgraduate course in some subject (physics, theoretical mechanics, computer science, radio engineering, chemistry, road building, etc.)
- to take (to do) a postgraduate course
- 2. a specialist field of research
 - to take up physics as one's specialist field of research
- 3. to specialize in some subject
- 4. to enter university
- 5. to graduate from a university with honours
- 6. to receive (to be awarded) a graduation diploma(certificate)
- 7. to have a special interest in automation and cybernetics
- 8. to take up microelectronics
- 9. to take entrance exams
- 10. the exams were very competitive
- 11.11 to apply for admission
- 12. a researcher, a research worker
- 13. tobe engaged in an area of exploration
- 14. topical areas of research
- 15. the work is of prime importance
- 16. fundamental and applied studies
- 17. institutions of higher learning
- 18. scientific-technical education, liberal education
- 19. the faculty (Am.), the teaching staff (BR.) of the university
- 20. towork in a design studio, lab, research institute
- 21. to show initiative
- 22. the university offers a full programme of degree courses
- 23.a scientific degree
- 24. to obtain a scientific degree
- 25. to be awarded a scientific degree
- 26. to get a scientific degree
- 27. tosubmit a dissertation (a thesis)
- 28.a candidate of sciences, a doctor of sciences
- 29. to embody the results of the research in a thesis
- 30. a three-year candidate's (doctorate) programme of studies

Answer the following questions

- 1. Are you an applicant for the candidate's degree or a postgraduate student?
- 2. What university or institute did study at?
- 3. When did you enter the university and when did you graduate from it?
- 4. What is your special field of research? When did you become interested in research work?

- 5. Did you join any students scientific societies while a student?
- 6. Where do you work now? Are you a teacher or a researcher? Do you work in industry or in a research centre?
- 7. Speak about the research laboratory where you work. How many people work there? What is the main orientation of research in the lab? Who is the head of the lab?
- 8. Why have you decided to take a postgraduate course?
- 9. Have you already passed the exams to attend postgraduate courses? Were the exams competitive? What exams did you take?
- 10. Have you decided on the theme of your thesis? How long have you been working on the theme?
- 11. Why have you taken this particular theme?
- 12. Could you name any innovative areas of investigation in your field? Is your investigation in line with any of them?
- 13. Is your research part of a state-supported project?

NOTE: When speaking on the problems outlined in the questions do not forget to use some introductory remarks:

- well,...
- let me think,...
- first of all,...
- let me see,...
- on the one hand, on the other hand,...
- to begin with,...
- talking of, speaking of,..
- as to..., as for...
- It is like this.
- The thing is that...
- generally speaking...

UNIT 2.

Methods and techniques of investigation Suggested vocabulary

- 1. a research
 - to do (to conduct) research
 - to carry out research
 - to discontinue (to give up) research
 - the research deals with..
 - the research is aimed at (concerned with, focused on, concentrated on)
 - a research project
 - to develop research skills
 - to intensify research activities
 - a specialized research project
 - a research laboratory
 - research output (the annual research output of the lab is big)
- 2. equipment
 - state-of-the-art (up-to-date, modern, outdated) equipment
 - reliable (unreliable) equipment
 - sophisticated (specialized) equipment
 - to handle equipment

- 3. to keep pace (to be in step) with latest scientific developments
- 4. a laboratory
 - a computer science laboratory
 - a laboratory assistant
 - the head of the lab, an assistant of the lab
 - laboratory set-up
 - advanced instrumentation of the lab
- 5. experiment
 - to experiment
 - to carry out the experiment
 - to stage experiments
 - a reliable experiment
 - a carefully staged experiment
- 6. the aim of the experiment is
 - to test a hypothesis
 - to obtain data
 - to confirm the theory
 - to study a process
 - to support the idea
 - to master new techniques
 - to verify the method (hypothesis, assumption, prediction)
 - 7. the results of the experiment
 - to process
 - to interpret _____ the results of the experiment
 - to evaluate
 - to report
 - 8. the data obtained in the experiment
 - are convincing (confusing)
 - agree with the prediction
 - prove (disprove) the hypothesis
 - confirm the assumption
 - 9. the project is sponsored (financed, supported) by the state
 - 10. a state-funded (state-supported) project
 - 11. a joint research and development project programme
 - 12. a long-term (short-term) research programme

Answer the questions

- 1. Is your perspective study going to be of theoretical or of practical value?
- 2. What problems deserve theoretical and experimental investigation in your field of research?
- 3. Which is more to your liking: theoretical or applied study?
- 4. What problems are you going to touch on in your dissertation?
- 5. As M.Faraday once said, there are three stages in any research: the first is to begin it, the second is to finish it, the third is to publish it. Which stage are you at now? Which stage has been the most difficult?
- 6. What factors ensure good progress in research?
- 7. Is there an experimental part in your research?
- 8. Where do you carry out experiments?

- 9. What are the aims of your experiments?
- 10. Have you ever had difficulties when doing experiments?
- 11. Is there a good laboratory set-up available where you can perform your experiments and get reliable, results? Do you have to handle any sophisticated equipment when staging experiments? Who helps you to design and carry them through?
- 12. What procedures are necessary to perform experiments in your case?
- 13. How do you process experimental results?
- 14. Have all your experiments been a success?
- 15. Have you ever had any unexpected results in your experiments?

NOTE: When you want to express your personal opinion you should do so a) in a gentle, not forceful way:

- I am inclined to think that...
- I tend to think ...
- I rather think...
- b) you may express more feeling, but remain fairly neutral:
 - as I see it...
 - if you ask me,...
 - as far as I can remember...
 - it is probable that...
- c) you will sound very forceful if you use:
 - I am certain that...
 - I am convinced that...
 - I definitely think that...
 - there is no doubt in my mind that...
- d) you will sound rude and patronizing, which is not recommended:
 - you have obviously not understood...
 - you seem to be unaware that...

UNIT 3.

Your scientific supervisor. Contacts with your colleagues. Publication of research data and research findings. International contacts

Suggested vocabulary

- 1. an exchange programme scheme
- 2. to visit a university on an exchange scholarship basis
- 3. to give particulars about one's research
- 4. to cooperate closely with smb
- 5. a resourceful and able executive
- 6. a prominent scientist
- 7. a leading authority in one's specialist field
- 8. a broad-minded person
- 9. to be enthusiastic about one's work
- 10. head of the chair(lab, department)
- 11. professor, assistant-professor, senior researcher
- 12. his advice has been most helpful (valuable)
- 13. to be published, to have something published
- 14. to go to a conference with a report

15. to show creative abilities as a researcher

16. to hold a symposium, conference, colloquium, meeting, seminar

17. abstracts of a report, a reprint of a report

- to supply
- to present
- to hand in

- to send in

- to send in

18. the Programme Organizing Committee of a conference

abstracts of a report

- 19. conference proceedings
- 20. to contribute to general scientific advancement
- 21. science knows no boundaries
- 22. a reprint of a paper
- 23. a special (specialized) journal
- 24. editorial board of the journal
- 25. to arrange for the exchange of specialists lecturers
- 26. the paper has gone to press, is coming off the press
- 27. to raise questions in a journal or the conference
- 28. a contribution to a journal
- 29. galley proofs
- 30. author's copyright
- 31. a copyright agency
- 32. to participate in the work of the conference
- 33. a plenary session, a round-table discussion
- 34. to collaborate with scholars at an international level
- 35. a learned article
- 36. studies of a speculative nature
- 37. well established authorities in their fields
- 38.to establish liaison with industry, international organisations

39. a library

- a well-stocked (spacious) library
- a large slide library
- the library contains 6.000 bound volumes and 5.000 microfilms

Answer the questions

- 1. Who is your scientific supervisor? Does he hold a scientific degree?
- 2. When and how did you meet your scientific adviser?
- 3. Why is it necessary for an applicant for the candidate's degree to perform supervised research? The cases when one does his or her research on his/her own are quite rare, aren't they?
- 4. Why is the three-year candidate's programme designed in such a way as to include elements of liberal education? How often do you have a chance to meet people who work in the same special field of research?
- 5. Does your department have contacts with other research centers of the country?
- 6. Have you had a chance to communicate with researchers from abroad?
- 7. Would you like to take a course of postgraduate studies at a university in the USA or Great

Britain?

- 8. Have you ever visited any American or British research center on an exchange scholarship basis?
- 9. Would you like to participate in an international scientific exchange project?
- 10. Does your lab collaborate with outside firms?
- 11. Do you or your ccolleagues perform any contract research or consultancy for industry?
- 12. Have you ever visited any technological exhibitions organized by foreign firms? Did you have a chance to speak to any of your foreign colleagues and discuss the exhibits there? Was it easy to hold a conversation? What language did you use? Was it difficult to express yourself in English?
- 13. Have you had any scientific papers published?
- 14. Have you ever applied for participation in a scientific conference? When was it? Was it a seminar, conference or symposium? Did you send an abstract of your report to the Organising Committee? Did you get an invitation to participate in the conference?
- 15.Is it easy to publish research findings? What problems do researchers usuall come across when they want to publish their research material?
- 16. Are there many specialized journals in your specialist field?
- 17. Do you regularly read specialized literature?
- 18. Do you have access to the latest publications in your area of research?
- 19. Is the University library well-stocked with technical literature?
- 20.Do you sometimes read specialized foreign journals? What are the journals you turn to most often?
- 21. Have you already read much on the theme of your research?
- 22. Are the latest publications in your research area available in the library? Is it easy to get a reprint of a paper, patent or book you need?

NOTE: When you answer the questions remember that to express agreement you may want to use some of these:

- I quite (fully, completely) agree with you ...
- yes, indeed..
- Right. Quite. Absolutely. Exactly. Precisely.
- I go along with that.
- Yes, you couldn't have put it better.
- That's just what I was going to say.
- I think so.
- I am afraid I can't agree with you there.
- I am sorry but I don't quite follow you.

UNIT 4. Difficulties in doing the research. Perspectives of further scientific development

Suggested vocabulary

- 1. to keep pace (to be in step) with the speed of scientific development
- 2. the work is of prime importance
- 3. to share views with smb
- 4. financial support of the project
- 5. to depend upon the financial support of the Government or industry
- 6. a wide range of contract research and consultancy
- 7. to encourage liaison (links) with industry
- 8. to promote and develop joint projects in areas of special interest

- 9. the programme research project is not supported by computing facilities
- 10. to have access to the latest findings in special fields of research
- 11. to ensure development of novel areas of research
- 12. up-to-date equipment is not available
- 13. to provide access to materials not contained in the library's collection
- 14. to overcome difficulties
- 15. a problem
 - to solve
 - to settle
 - to analyse > a problem
 - to consider

16. the most urgent problem to be solved is

- 17. to coordinate research activities
- 18. to be pressed for time
- 19. the experimental part of the work is time-consuming
- 20. to obtain valuable and reliable results from the work
- 21. the work is of purely theoretical applied character
- 22. The research may be of some value in the study of...

Answer the questions

- 1. When do you plan to finish your research and submit your thesis?
- 2. What post would you like to apply for after you obtain your candidate 's degree?
- 3. Are research facilities in the lab where you work adequate?
- 4. Is your research project well-supported by computing and instrumentation facilities?
- 5. Does your research depend on sponsorship from a government institution or industrial company?
- 6. Do you think that encouraging cooperation between research centers and industry in areas of mutual interest could be a way out of financial difficulties you and your colleagues face today?
- 7. Are you pressed for time?
- 8. Are you enthusiastic about your work?
- 9. Has it occurred to you to give up your research and take up something new and more financially rewarding?
- 10. Do you think your research would contribute to scientific advance in your specialist field?

NOTE: When asking someone to repeat a question you could say:

- Could you please say it again?
- Would you please speak slower? I don't quite follow you.
- I'm sorry, but I find your question difficult to answer. Can I ask you to put it in other words?
- Would you mind repeating your question?
- Could I ask you to repeat it?
- Could you possibly expand on that?

Act out the following situations with your classmates. Discuss different aspects of the situations, expressing yourself as clearly as possible.

- 1. Speak of your personal experience when taking entrance examinations for postgraduate courses. Recollect the event in as much detail as possible: how many people were in the examination, board, how many questions were you asked, did your answers satisfy the examiners, etc.?
- 2. Give a short account of your last interview with your scientific supervisor. What aspects of your research did you discuss? Were his/her comments on your work helpful?
- 3. Suppose you have come to the University library to find out if current journals in
- 4. your field of research are available. You produce a substantial list of editions you need, but the librarian says that only some of them are available and suggests that you go to the regional library and get the rest there.
- 5. Imagine you have come to an exhibition of modern computer technologies, organized in Moscow by s group of foreign firms and corporations with IBM among them. You are speaking to an IBM expert. What questions would you like to ask him about the exhibits presented by IBM?
- 6. Suppose you are taking part in an international symposium on theoretical mechanics (radio, building, modern technology, ecology). During an interval between the sittings of the symposium you are introduced to an American researcher who works in the same field as yourself. What questions would you ask your American colleague?
- 7. Suppose a group of British scholars has come to Vladimir State University. This is part of a longterm project of scientific exchange between Vladimir University and the University of Kent. You are invited to participate in a meeting between the teaching staff of your department and the British guests. Talk about your impressions of the meeting.