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Учебное пособие
«Конструирование изделий легкой про-
мышленности учебное пособие по англий-
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по дисциплине

«Иностранный язык в про-
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Оглавление

MODULE 1

THE LANGUAGE OF CLOTHES

Pre-reading

1.   Comment on the following words said by Sophie Kinsella:

"I love clothes. If everyone could just wear new clothes every day, I reckon depression wouldn't exist anymore".

2.   Vocabulary:

A value – ценность
Uniformity – единообразие
Influence – влияние
Mainly – главным образом
To announce – объявлять
Mood – настроение
To be apt to – быть склонным
Shabby– поношенный, обносившийся
Filthy– грязный, неряшливый
Tatters – лохмотья
Miserable – несчастный

Reading

3. READ AND TRANSLATE THE TEXT:

THE HISTORY OF CLOTHING IS VERY COMPLEX AND AS LONG AS THE HISTORY OF HUMAN CIVILIZATION. CLOTHING DOES NOT ONLY COVER THE HUMAN BODY AND KEEPS PEOPLE WARM OR COOL; IT ALSO HAS ITS SOCIAL, CULTURAL AND EMOTIONAL VALUES. CLOTHES OF POOR PEOPLE IN RUSSIA, ENGLAND, FRANCE, SPAIN OR CHINA AS WELL AS IN MANY OTHER COUNTRIES ALWAYS DIFFERED GREATLY FROM CLOTHES OF RICH PEOPLE. FROM THE ANCIENT TIMES CLOTHING SHOWED THE SOCIAL STATUS OF A PERSON, HIS OCCUPATION, IDEAL, TASTE AND SOMETIMES SOCIAL IDEAS A PERSON FOLLOWED. AT THE SAME TIME CLOTHES HAVE SHOWN VARIATIONS BETWEEN ONE COUNTRY AND ONE REGION AND ANOTHER.

THERE WAS NO UNIFORMITY OF STYLE IN CLOTHES AS IT IS TODAY. MANY COUNTRIES HAD THEIR NATIONAL COSTUMES AND CREATED THEIR FASHIONS. IN THE 17TH CENTURY FRANCE

DICTATED FASHION IN EUROPE BUT IN THE 18-19TH CENTURIES THE INFLUENCE OF THE ENGLISH FASHION BECAME STRONGER AND STRONGER ESPECIALLY IN THE FASHION FOR MEN. ENGLAND GAVE A BIRTH TO THE FAMOUS TAILORED COSTUME WITH ITS ELEGANT LINES WHICH IS STILL VERY POPULAR. WE MAY SAY THAT THE COUNTRY DOMINATING IN EUROPE DICTATED FASHION AND STYLE IN CLOTHES BUT MAINLY AMONG THE ARISTOCRACY.

HAS ANYTHING CHANGED IN OUR CENTURY? TODAY THE VARIATIONS IN CLOTHING ARE DISAPPEARING AND THERE IS A TENDENCY TOWARDS A UNIVERSITY OF STYLE. THE FASHION BECAME INTERNATIONAL. BUT CLOTHING AS IT WAS EARLIER CAN TELL PEOPLE VERY MUCH ABOUT A WEARER.

LONG BEFORE WE ARE NEAR ENOUGH TO TALK ON THE STREET, IN A MEETING OR AT A PARTY WE ANNOUNCE OUR SEX, AGE AND CLASS THROUGH WHAT WE ARE WEARING – AND OFTEN GIVE INFORMATION (OR MISINFORMATION) ABOUT OUR OCCUPATION, ORIGIN, PERSONALITY, TASTES, AND OUR CURRENT MOOD.

FOR THOUSANDS OF YEARS HUMAN BEINGS HAVE COMMUNICATED WITH ONE ANOTHER FIRST IN THE LANGUAGE OF DRESS. SHABBILY DRESSED PEOPLE ARE MORE APT TO BE TREATED SHABBILY. A MAN IN A CLEAN WELL-PRESSED SUIT IS LIKELY TO BE HELPED UP SOONER THAT THAN ONE IN FILTHY TATTERS.

A PERSON CAN LOOK RIDICULOUS IN EXPENSIVE FASHIONABLE CLOTHES IF HE FOLLOWS FASHION WITHOUT TAKING INTO ACCOUNT HIS AGE, OCCUPATION, FIGURE OR COLOR COMBINATIONS, I.E. WHEN HE LACKS GOOD TASTE.

BEING AN INSEPARABLE PART OF HUMAN LIFE CLOTHES CAN MAKE A PERSON FEEL HAPPY AND SELF-CONFIDENT OR MISERABLE, UNHAPPY AND ILL AT EASE. THE INFLUENCE OF CLOTHES ON THE FEELINGS OF A PERSON IS VERY STRONG.

VERY OFTEN, AS IT WAS MENTIONED ABOVE, YOU CAN FIND OUT FROM THE FIRST GLANCE WHAT KIND OF PERSON YOU ARE DEALING WITH; WHAT GROUP OF THE SOCIETY HE BELONGS TO; WHAT IDEAS HE FOLLOWS. THE LANGUAGE OF CLOTHES IS VERY EXPRESSIVE AND ONE SHOULD LEARN IT.

Vocabulary Practice and Grammar Revision

4. Answer the following questions:

1. What values does clothing have besides its direct designation?

2. What did clothing tell about people even in the ancient times?

3. What countries dictated fashion in the 17-19th centuries?

4. What fashion piece of clothing did England give birth to?

5. What tendency of clothing prevails nowadays?

6. What can our clothes say about us?

7. How do the quality and choice of clothes influence our lives?

8. Can the way you are dressed help you in communicating with people?

5. Translate the following word combinations into English:

В тоже время; также как и во многих других странах; влияние моды усилилось; в строгом стиле; как и раньше; наше настроение; хорошо-выглаженный костюм; выглядеть нелепо; следовать моде; отсутствие хорошего вкуса; будучи неотделимой частью; как упоминалось выше; с первого взгляда; с каким человеком ты имеешь дело; чувствовать себя неловко; всегда сильно отличались.

6. Put the verbs in brackets in the appropriate form:

1. In Britain people (to follow) different fashion tendencies in different periods of history.

2. Uniforms (to provide) an instant image for the group of people.

3. In 1981, a small group of clothes shops (to take) over by George and Liz Davies, a married couple, and (to name) Next.

4. I think she (to wear) a white shirt with a detachable white collar for tomorrow's interview.

5. That amazing trendy dress (to be) unlike any other one she (to see) before.

6. Look! The girl checking out her look in front of the mirror is (to wear) a denim skirt I just (to tell) you about.

7. The jacket (to look) untidy before it (to be customized) with embroidery.

8. When I (to relax) at home or out meeting with my friends, I (to wear) comfortable clothes like jeans or trousers and a top or T-shirt.

7. Read the text and fill in the text with the corresponding linking words:

Firstly   Secondly   Thirdly   As a result   Finally   But
However (2)   Such as   First of all   More than that (2)   Besides

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I think that participating in a reality makeover show (1) ….. "What Not to Wear" has many advantages. (2) ….. you are given advice about what not to wear. And (3) ….. you are given advice on how to dress in the latest fashion. (4) ….. you are given 100 000 roubles to give your wardrobe a total makeover! You are advised about how to make the right choice when picking clothes and (5) ….. and you start looking cool and stylish – you get a new look which is admired by everybody.

(6) ….. participating in a makeover has some disadvantages. (7) ….. you are nominated as unfashionable by your close relatives or friends, which is offensive. (8) ….. your look is criticized in front of millions of TV viewers which is also very humiliating. (9) ….. the style consultants' advice is often rather cruel and posing before cameras is not easy. And, (10) ….. if it is impossible to stick to the changes after several months, why start? (11) ….. the most unpleasant thing of all is that you are not free to spend the money on what you like.

(12) ….., despite the disadvantages I would like to take part in such a show. (13) ….. I would not be against some of my friends' participating in it too. I wish the style consultants told me and my friends what would work best for us.

Language Development

8. Discuss the place clothing takes in our life.

9. Work in pairs. Tell your partner whether you agree or disagree with these statements and why:

a. Some clothes do not look good on anybody and should never be worn.

b. You need a lot of money to always look fashionable.

MODULE 2

FUNCTIONS OF CLOTHING

Pre-reading

1. Vocabulary:
Insulation – изоляция
Modesty – скромность
An adornment – украшение
Elaborate – тщательно разработанный; продуманный; сложный

To injure – ранить; испортить; причинить ущерб

Sheer – явный
A hazard – опасность
Noxious – вредный; пагубный; ядовитый
A scrub – 1) кустарник, поросль; 2) жесткая щетка
Armor – 1) вооружение, доспехи, 2) скафандр
A gear – 1) одежда; 2) движимое имущество, утварь

Reading

2. Read and translate the text:

The most obvious function of clothing is to improve the comfort of the wearer, by protecting the wearer from the elements. In hot climates, clothing provides protection from sunburnt or wind damage, while in cold climates its thermal insulation properties are generally more important. Shelter usually reduces the functional need for clothing. For example, coats, hats, gloves, and other superficial layers are normally removed when entering a warm home, particularly when one is residing or sleeping there. Similarly, clothing has seasonal and regional aspects, so that thinner materials and fewer layers of clothing are generally worn in seasons and regions than in colder ones.

Clothing performs a range of social and cultural functions, such as individual, occupational, and social differential, and social status. In many societies, norms about clothing reflect status of modesty, religion, gender and social status. Clothing may also function as a form of adornment and expression of personal state of style.

Clothing can and has in history been made from a very wide range of materials. Materials have range from leather to furs, to woven materials, to elaborate and exotic natural and synthetic fabrics. Not all body coverings are regarded as clothing. Articles carried rather than worn (such as purses), worn on a single part of the body and easily removed (scarves), worn purely for adornment (jewelry), or those or serve a function other than protection (sunglasses), are normally considered accessories rather than clothing, as are footwear or hats.

Clothing protects against many things that might injure the uncovered human body. Clothes protect people from the elements, including rain, snow, wind and other weather, as well from the sun. However, clothing that is too sheer, thin, small, tight etc. offers less protection. Clothes also reduce risk during activities such as work or sports. Some clothing protects from specific environmental hazards, such as insects, noxious chemicals, weather, weapons, and contact with abrasive substances. Conversely, clothing may protect the envi-

ronment from the clothing wearer, as with doctor wearing medical scrubs.

Humans have shown extreme inventiveness in devising clothing solutions to environmental hazards. Examples include: space suits, air conditioned clothes, armor, diving suits, swimsuits, bee-keeper gear, motorcycle leathers, high-visibility clothing, and other pieces of protection clothing. Meanwhile, the distinction between clothing and protective equipment is not always clear-cut – since clothes designed to be fashionable often have protective value and clothes designed for function often consider fashion in their design. Wearing clothes also has social implications. They cover parts of the body that social norms acquire to be covered, act as a form of adornment, and serve other social purposes.

Vocabulary Practice and Grammar Revision

3. Answer the following questions:
1. The question of clothing being important is obvious, is not it? Can you explain why?
2. In what countries is the necessity of being warmed up with the help of   clothing a more vital question compared to the others?
3. What social and cultural functions can clothing perform?
4. What role do different materials play in clothing making?
5. What personal things are not regarded as clothing though people wear them on their bodies?
6. What elements can clothing protect from?
7. What risks do clothes reduce during people's activities?
8. What kind of clothes can be regarded as protective means?

4. Give the antonyms to the following words:
To improve, to reduce, important, usually, superficial, to enter, remove, particularly, conversely, against

5. Find the odd word. Explain why you have chosen it.
1. Boots, trainers, slippers, high heels, clogs, tights, flip-flops;
2. A pair of trousers, a pair of shorts, a pair of pants, a pair of scissors, a pair of stockings;
3. A pocket, a button, a cuff, laces, a zip, a blanket, a sleeve, a collar, a heel;
4. Striped, floral, plain, checked, tight, motley, speckled;
5. A jumper, a blouse, a T-shirt, a skirt, trimming, a shirt;
6. Silk, woolen, gorgeous, denim, cotton, nylon.

6. Read the following text and put the appropriate words into blanks:

Precipitation, mittens, weapons, apparel, hoods, to hide, wellingtons.

Clothing is defined, in its broadest sense, as coverings for the torso as limbs as well as coverings for the hands (gloves, …..), feet (socks, shoes, sandals, boots, …..) and head (hats, caps, …..). Humans nearly universally wear clothing which is also known as dress, garments, attire or ….. .

The practical function of clothing is to protect the human body from weather, strong sunlight, extreme heat, or cold, and ….. as well as protect from insects, noxious chemicals, ….. , and contact with abrasive substances. In conclusion, clothing protects against anything that might injure the naked human body.

Clothing also serves … the naked body from sight, can show social roles and status.

Language Development

7. Agree or disagree with the statements given below:

a. For some professionals a uniform is mostly important in their work.

b. The style or color of clothing is necessary to observe in some occasions.

8. Retell the text using the questions to the text as a plan.

MODULE 3

THE HISTORY OF MODERN LIGHT INDUSTRY

Pre-reading

Vocabulary
To stitch – шить
A shelter – укрытие
A sinew– сухожилие
A caribou– карибу, северный канадский олень
Indigenous – местный, природный
Sophisticated– сложный
Tippi – неустойчивый
To weave – ткать
A seamstress – швея

To extend – продлевать
Longevity – долговечность
To mend – чинить
To fade – выцветать
A quilt– стеганое одеяло
To involve (in) – вовлекать (во что-то)
A trousseau – приданое
Embroidery – вышивание
A settlement – поселение
An applique – аппликация

Reading

2. Read and translate the text:

Sewing has an ancient history estimated to begin during the Paleolithic Age. Sewing was used to stitch together animal hides for clothing and for shelter. The Inuit, for example, used sinew form caribou for thread and needles made of bone, the indigenous peoples of the American Plains and Canadian Prairies used sophisticated sewing methods to assemble tipi shelters. Sewing was combined with the weaving of plant leaves in Africa to create baskets, such as those made by Zulu weavers who used thin strips of palm leaf that had been woven into a coil. The weaving of cloth from natural fibers originated in the Middle East around 4000 BCE, and perhaps earlier during the Neolithic Age, and the sewing of cloth accompanied this development.

During the Medieval Ages, Europeans who could afford it employed seamstresses and tailors. Sewing for the most part was a woman's occupation, and most sewing before the 19th century was practical. Clothing was an expensive investment for most people, and women had an important role in extending the longevity of items of clothing. Sewing was used for mending. Clothing that was faded would be turned inside-out so that it could continue to be worn, and sometimes had to be taken apart and reassembled in order to suit this purpose. Once clothing began worn or torn, it would be taken apart and the reusable cloth sewn together into new items of clothing, made into quilts, or otherwise put to practical use. The many steps involved in making clothing from scratch (weaving, pattern making, cutting, alterations, and so forth) meant that women often bartered their expertise in a particular skill with one another. Decorative needlework such as embroidery was a valued skill, and young women with the time and means would practice to build their skill in this area.

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From the Medieval Ages to the 17th century, sewing tools such as needles, pins, and pincushions were included in the trousseaus of many European bribes.

Decorative embroidery was valued in many cultures worldwide. Although most embroidery stitches in the Western repertoire are traditionally British, Irish or Western European in origin, stitches originating in different countries are known throughout the world today. Some examples are the Cretan Open Filling stitch, Romanian Couching or Oriental Couching, and the Japanese stitch. The stitches associated with embroidery were spread by way of the trade routes that were active during the Medieval Ages. The Silk Road brought Chinese embroidery techniques to Western Asia and Eastern Europe, while techniques originating in the Middle East spread to Southern and Western Europe through Morocco and Spain. European imperial settlements also spread embroidery and sewing techniques worldwide. However, there are instances of sewing techniques indigenous to cultures in distant locations from one another, where cross-cultural communication would have been historically unlikely. For example, a method of reverse applique known to areas of South America is also known to Southeast Asia.

Vocabulary Practice and Grammar Revision
3. Answer the following questions:
1. When did sewing begin?
2. What examples of sewing usage in the Paleolithic Age can you give?
3. What kinds of material were used in sewing production?
4. For whom was sewing affordable in the 17th century?
5. What different purposes was sewing used for?
6. What steps of making were involved in sewing?
7. What decorative needlework was especially valuable in many countries that time?
8. What can you say about embroidery stitches being then used and the way of their spreading into other countries?

4. Read the following sentences and define in what function the underlined verbs are used in them. Revise the material on the Simple Tense and the use of the form of Past Participle.
1. Sewing has an ancient history estimated to begin during the Paleolithic Age.
2. Sewing was combined with the weaving of plant leaves in Africa to create baskets, such as those made by Zulu weaves, who used

thin strips of palm leaf as "thread" to stitch wider strips of palm leaf that had been woven into a coil.

3. The weaving of cloth from natural fibers originated in the Middle East around 4000 BC, and the sewing of cloth accompanied this development.

4. Clothing that was faded would be turned inside- out so that it could be continued to be worn and sometimes had to be reassembled to suit this purpose.

5. Once clothing was worn or torn, it would be taken apart and the reusable cloth sewn together into new items of clothing, made into quilts, or otherwise put to practical use

6. Decorative needlework such as embroidery was a valued skill.

7. Decorative embroidery was valued in many cultures abroad.

8. The stitches associated with embroidery were spread by way of the trade routes that were active during the Medieval Ages.

9. European imperial settlements also spread embroidery and sewing techniques worldwide.

5. For the following words choose the words from the text having the same meaning:

Costly, a blanket, a skin, to make, far away, to exchange, complicated, to hire, a thing, to lose color, to sew, a craft, a goal, a hide, to appreciate.

Model: Vivid – active

6. Put the appropriate words into the gaps:

Labor, it, new, art, consumable, with, time, was, or.

In past times, mending was an … . A meticulous tailor … seamstress could mend rips … thread raveled from hems and seam edges so skillfully that the tear … practically invisible. When the raw material that is cloth was worth more than labor … made sense to expend labor in saving it. Today clothing is considered a … item. Mass-manufactured clothing is less expensive than the … required to repair it. Many people buy a … piece of clothing rather than spend … mending. The thrifty still replace zippers and buttons and sew up ripped hems.

Language Development

7. Read the text again. Write out the key words from the text.
8. Retell it using the questions from the previous task as a

plan.

MODULE 4

SOCIAL IMPACT

Pre-reading
1. A true man would rather have his clothes torn than mended.
2. Vocabulary:
To maintain – поддерживать в хорошем состоянии
With the aid of – при помощи
To devote (to) – уделять
An outfit – наряд, одежда
To diminish – уменьшать, убавлять
A burden – груз, ноша
An amount – количество
Previously – заранее, предварительно
An earning – заработок
Eventually – в конечном итоге
Upholstery – обшивка
A curtain – занавеска

Reading
3. Read and translate the text:
Before sewing machines were invented women spent much of their time maintaining their family's clothing. Middle-class housewives, even with the aid of a hired seamstress, would devote several days of each month to this task. It took an experienced seamstress at least fourteen hours to make a dress shirt for a man; a woman's dress took ten hours, and a pair of summer pants took nearly three hours. Most individuals would have only two sets of clothing: a work outfit and a Sunday outfit.

Sewing machines reduced the time for making a dress shirt to one hour 15 minutes; the time to make a dress to an hour; and the time for a pair of summer pants to 38 minutes. This reduced labor resulted in women having a diminished role in household management, and allowed more hours for their own leisure as well as the ability to seek more employment.

Industrial use of sewing machines further reduced the burden placed upon housewives, moving clothing production from housewives and seamstresses to large-scale factories. The movement to large-scale factories also resulted in a decrease in the amount of time cloth-

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ing production took, which caused the prices for clothing to drop significantly. This is because manufacturers were able to decrease the number of workers needed to produce the same amount of clothing, resulting in reduced costs. Increase supply also lowered the cost.

The initial effects of sewing machines on workers were both positive and negative, however in the long run the negative effects decreased. Many of the women who had previously been busy at home could now seek employment in factories, increasing the income for their family. This allowed for families to be able to afford more sets of clothing and items than they previously could. For seamstresses, home sewing machines allowed them to produce clothing for an average person during periods when demand for fitted clothes was low, effectively increasing their earnings. When industrial sewing machines initially became popular many seamstresses working in factories as well as those working at home lost their jobs as it meant that fewer workers could produce the same output. In the long run these now unemployed workers along with thousands of men and children would eventually be able to gain employment in jobs created as the clothing industry grew.

The sewing machine's effects on the clothing industry resulted in major changes for other industries as well. Cotton production needed to increase in order to match the demand of the new clothing factories. As a result cotton became planted in the new areas where it had not been farmed before. Other industries involved in the process benefited as well such as metal companies who provided for the parts of the machines and shippers to move the increased amounts of goods. Gun makers visited clothing factories in order to perfect their own mass production techniques. In addition to being important for clothing production, sewing machines also became important in the manufacturing of furniture with upholstery, curtains and towels, toys, books and many other products.

Vocabulary Practice and Grammar Revision

4. Answer the following questions:

1.	How much time was spent on clothes making by women before sewing machines were invented?

2.	How many sets of clothing did people have that time?

3.	How did the invention of sewing machines change the life of women mainly?

4.	What social improvements followed the industrial use of sewing machines?

5.		Did it influence the cost of clothing and why?

6.		What were the initial positive and negative effects of it?

7.		How did all changes in sewing production influence the other industrial spheres?

8.		What textile products manufacturing did the sewing machine become important for?

5. Translate the following sentences from Russian into English:

1. При помощи швейной машинки на пошив платья уходило не менее 1 часа.

2. Так как у женщин появилось больше свободного времени, они могли позволить себе заниматься не только домашними делами, но и искать работу вне дома.

3. В результате того, что время на производство одежды сократилось, цены также снизились.

4. Какими были первоначальные воздействия на рабочих в результате появления швейных машинок?

5. Женщины смогли увеличить доход для своих семей.

6. С ростом промышленности появились новые работы.

7. Развитие швейной промышленности повлияло также на развитие и таких отраслей, как хлопчатобумажная промышленность и металлообрабатывающая.

8. Швейные машинки также начали использоваться для производства обшивки для мебели, занавесок, полотенец, игрушек и других вещей.

6. Form nouns from the following verbs by adding the suffixes and translate them:

- ance – to appear, to maintain, to allow, to disturb, to clear;

- ment – to replace, to move, to involve; to develop, to infringe;

- sion – to provide; to collide; to divide; to decide;

- tion – to invent, to devote, to reduce, to produce, to perfect;

- or/er – to invent, to work, to produce, to manage, to make, to do, to act.

7. Define the functions of the following technical positions:

1. Technicians and mechanics
2. Industrial engineers
3. Production managers
4. Quality control technicians

a. They plan and supervise the production process.

b. The plan and purchase the machinery and set the rates paid to operators.

c. The service the machinery, much of which is computerized.

d. They check that the final garments have been made correctly and will stand up   to wear.

Language Development

8.   Comment   on   the   following   statements:
a. The influence of an invention of a sewing machine on the people's life was enormous.

b. Name some other influential inventions the appearance of a sewing machine can be compared to by its significance.

4. Find in the text the nouns derived from the following adjectives and translate them:
Model: Coherent - coherence
Creative, compositional, universal, objective, real, whole, integral, proportional, important, expressive, excessive, flat

5. Form nouns from the following adjectives with the help of the suffixes – -ty, -y,   -ness, -cy, -ism and translate them:
Model: Clear – clearance
Human, intensive, efficient, theoretical, certain, integral, separate, indivisible, mutual, significant, valid, dominant, perspective, complex, aggressive, able, qualitative, visible, similar, rich, excessive.

6. Match the words from the first column with the words from the second column:

shoulder-padded	shoes
jacket with	high heels
skirt with	embroidery
platform	jacket
training	suit
shoes with	skirt
polo neck	boots
mini	a petticoat
trouser	sweater

MODULE 6

GARMENT PRODUCTION SYSTEMS (Part 2)

Pre-reading
1. Vocabulary:
To convert (into) – превращать (во что-то)
To meet the demand – удовлетворять требования
To depend (on) – зависеть (от)
To club – собирать вместе
A collar– воротник
A cuff – манжета, обшлаг
Utilization– использование, употребление
Multiple– состоять из многих отделов
To clamp– складывать
A hanger– крюк, крючок, вешалка (для одежды)
To refer – относиться

Reading
2. Read and translate the text:
In simple a "garment production system" is a way how fabric is being converted into garment in a manufacturing system. Production systems are named according to the various factors, like number of machines used to make a garment, machines layout, total number of operators or tailors involved to sew a complete garment and number of pieces moving in a line during making a garment. As the fashion industry evolved and demand of ready garments are increased the need of mass production system becomes the primary path to meet the demand as tailor shops are not able to produce the sufficient volume and supply of garments throughout the world. Mostly used production systems are as following.

Make -Through System
The process when a tailor alone makes a complete garment is called as a "make through system". The tailor even makes a pattern or uses a readymade pattern, cuts fabric and does finishing of the garment. For example, tailors in the tailor shops do all jobs from cut to pack. In this system tailors are not dependent on the others.

Section Production System
The system is similar to the progressive bundle system. But the difference is that instead of one line the work is divided into sections.

Machines of similar operations are clubbed together instead of spreading over in all lines. That is, for example, a man's formal shirt having been made in a section layout (collars, cuffs, and sleeves) in the preparatory section then is sent to the assembly section. This system is popular as it improves line balancing as well as utilization of human resources.

Modular Production System

In "modular production systems" sewing operators work as a team. Neither they sew a complete garment nor do they sew only a single element. Multi skilled operators form a group and each of the team members does multiple operations. In a modular production system sewing operators help each other to finish the garment quickly and the team is fully responsible for the quality and production. Here, that is the team performance is always measured and not the individual operator performance. This system is very successful where quick response is needed.

One -Piece -Flow System

Instead of making a bundle of multiple pieces the bundle is composed of all components of a single piece. Sewing machines in "one -peace -flow system" can be laid in a straight line or modular one. The main distinction here is that an operator receives a piece from back and moves it to the next operator after completing his work. The benefits of this system are less through put time, less VIP in the line.

Overhead Production System

In overhead production system garment component are clamped in a hanger and the hanger moves on an overhead rail. In the hanger components of a single piece are clamped. So this is also one kind of single piece flow system.

Piece -Rate Production System

Piece rate production system is especially popular in small and unorganized factories. Though people call it "piece -rate production system" actually it is not a production system. Whatever production system mentioned above is used where operators are paid according to the quantity of work they produce (a number of pieces produced) is referred to as a piece -rate system.

Vocabulary Practice and Grammar Revision

3. Answer the following questions:
1.   What is a garment production system?
2.   Why does the need of mass production system be-

come the primary path to meet the market demands?

3.   What garment production systems are touched upon in this text?

4.   What is a Make-Through system?

5.   How does the Modular Production system work?

6.   What is the main principle of One-Peace -Flow Production system?

7.   What production system viewed upon in the text is Overhead Production system similar to?

8.   What is a Piece-Rate Production system?

4. From the following adjectives in the text, form adverbs with the help of the suffix –ly and translate them:

Model: Approximate - approximately

Specific, standard, frequent, individual, progressive, normal, mechanical, direct, automatic, special, electronical

5. Read the text and find the words with the same meaning:

To endure   to curtail   concrete   out of work   agility

To lay off   handwork   inactive   agreeable   intense

Working conditions depend on the plant and on the specific job. Overall, work in the apparel industry is not physically strenuous, although some jobs are monotonous. Most production workers are paid by the piece – that is, by the quantity of work they do. Therefore, they may be under pressure to work quickly. Many jobs require good eyesight and manual dexterity. Sewing machine operators and other workers in the sewing room are often exposed to the noise and vibration of machinery. Pressers must tolerate the heat generated by their equipment. Designers, cutters, and patternmakers usually work in more pleasant areas. Most of newer plants have well-lit, comfortable work places. Many production workers belong to unions. Hours generally range from thirty-five to forty hours per week. Because apparel work is seasonal, production workers may have periods of unemployment. However, during slack periods many firms reduce the number of working hours for all workers rather than lay off some workers.

6. Revise the material on Present and Past Participles. Form Present and Past Participles from the following verbs first Regular and then Irregular verbs.

To be, to convert, to involve, to sew, to meet, to supply, to cut,

to divide, to spread, to send, to improve, to multiple, to measure, to receive, to complete, to clamp, to clap, to mention, to pay.

Language Development

7. Read the text again. Write out the key words.

8. Translate the text in writing.

9. Enumerate the production systems and describe their main features.

ASSEMBLY LINE SYSTEMS (Part 2)

Pre-reading
1. Vocabulary:
To assign (to) – назначать; приписывать
Sequentially – последовательно
To vary – различать
An investment – вложение
Frequent – частый
An incentive – побуждение, стимул
To offer– предлагать
To reduce– сокращать, уменьшать
To advance– продвигать
To grasp– схватывать; понимать
To release– освобождать, ослаблять
To retain– сохранять
A batch– партия, группа, пачка
A destination – место назначения

Reading

2. Read and translate the text:

There are two variations of the assembly line system being followed in the industries, namely:

1. Progressive Bundle System and

2. Unit Production System.

In progressive bundle system machines and operations are organized into sections according to the basic functions where subcomponents are produced. Within each section work is balanced according to the time required for each sub-function.

Here are given the advantages of Progressive Bundle System. They are the following:

- high productivity is achieved;
- a high level of labor utilization can be achieved;
- training time and costs can be reduced;
- semi-skilled labor can be used.

However, there are even more disadvantages of progressive bundle system. They are the following:

- machine investment costs are high;
- the system is not very adaptable for short–run production and frequent style changes as these require rearrangement of the workstation;
- it involves high handling costs for bundle handling and transportation;
- it requires a high level of work in progress and therefore a high capital commitment;
- it requires a high level of management skills to arrange the workflow and decide on the number of operators;
- individual performance can be monitored and incentives be offered.

In the Unit Production System which is similar to a relay race each production operator has a task to do and then pass the garment on to the next person in work. Normally, it is only one garment between operations. As a mechanical system it has been in use for a long time but a major advance was made in 1983 when computers were first used to plan, control and direct the flow of work through the system.

The essential features of this system are:

a) The unit of production is a single garment and not bundles.

b) The garment components are automatically transported from workstation to workstation according to predetermined sequence.

c) The workstation is so constructed that the components are presented as close as possible to the operator.

All the components for one garment are loaded into a carrier at a workstation specially designed for this purpose. The carrier itself is divided into sections with each section having a quick-release retaining clamp which prevents the components from falling out during the movement through the system. When a batch of garments has been loaded into a carrier it is fed into a mechanical or electronic device which records the number of the carrier and addresses it to its first destination.

Vocabulary Practice and Grammar Revision

3. Answer the following questions:
1.   What is an Assembly Line System?
2.   What are two variations of the Assembly Line System?
3.   What is a Progressive Bundle system?
4.   What are the advantages of the Progressive Bundle System?
5.   What are the disadvantages of the Progressive Bundle System?
6.   When was a drastic change in the development of the Unit Production System and why?
7.   What are the essential features of the Unit Production System?
8.   What process does a garment undergo on the way to its first destination?

4. Match the following word combinations with the appropriate prepositions:

According	With
To be divided	From
To be required	To
Similar	Into
To consist	To
To be organized	Into
To address	Of
To be loaded	To
To be designed	To
To prevent	For
To be assigned	Into
In order	For
To work	To

5. Match the English Passive constructions with the Russian equivalents. Make up your own sentences using these constructions

Are organized into	a. чтобы сшить
Can be monitored	b. делится на
Have been achieved	c. были отправлены
Could be reduced	d. загружали
Will be used	e. чтобы можно было снизить
Were transported	f. был

загружен
    To be sewn   g. можно
просматривать
    Is divided into   h. будет
использован
    Had been loaded   i. были
достигнуты
    Was being fed   j.
распределены

Language Development

6. Read the text again. Write out the keywords of the text.
7. Say about the differences of the two Assembly line systems.

MODULE 7

STEP-BY-STEP PROCESS OF GARMENT MANUFACTURING PART 1

Pre-reading

1. Can you give the Russian equivalents to the following English proverbs:
    a. A stitch in time saves nine.
    b. Measure thrice and cut once.

1. Vocabulary:
Rough – грубый
A sketch – набросок
To render– изображать, передавать
A pattern– образец
Calico– коленкор, миткаль
Muslin– муслин
Atissue– волокно
Available– быть в наличии
A ream– катушка, моток
Ease– свобода
Fluency – плавность
Precision – точность
A stature – рост, фигура
Cumbersome – трудный

Yardage– метраж
Adhesive– клейкий, связывающий
To stack– складывать один на другой
A saw – пила
A blade – лезвие
Reciprocal – взаимный
Severe – суровый
Frame – рама, рамка, сооружение

Reading

3. Read and translate the text:

In the garment manufacturing the first step is designing the sketch for the dresses that have to be prepared. For this purpose the designer first draws several rough sketches in the sketch book. The designer does not go for details at this moment but he rather lets his creativity flow on the paper and he draws many sketches. Later these sketches are analyzed by a panel of designers. They finally select few out of them. These few sketches are rendered in detail separately or in the form of a single collection. The designer also draws working drawings along with the sketch. Working drawings are a flat drawing of the sketch which helps pattern maker in understanding the patterns involved in the construction.

The pattern maker now develops the first pattern for the designs in any standard size. This is made by pattern drafting method and the purpose of making the pattern is to create the sample garment for test fit.

The first patterns are sent to the sewing unit for assembling them into garment. This is usually stitched on calico or muslin which is an inferior quality of fabric and it reduces cost. This sample is constructed to analyze the pattern fit and design too. After the sample garment is stitched it is reviewed by a panel of designers, pattern makers and sewing specialists. If any changes have to be made they are made at this time.

The pattern design is now taken for creating the production patterns. The production pattern is one which will be used for huge production of garments. The pattern maker makes the pattern on standard pattern making paper. These papers are made-up of various grades. The most important component, the tissue paper pattern, is made from the lightest and thinnest paper commercially available (it is not made at the pattern companies). It is called 7.5lb (3.4kg) basis paper meaning that a ream of it (500 sheets) only weighs 7.5lb

(3.4kg). Garment patterns can be constructed by two means: manual method and CAD/CAM method. A garment sewing pattern or garment fabric & patterns draft is developed by calculating, taking account of the following measurements:

1. Direct Sample.
2. Specification Sheet/Measurement Chart.
3. Actual Body Size Measurements.
4. Ease Allowances.
5. Sewing Allowances.

These allowances are different for different type of fabrics and patterns.

The next step is grading the purpose of which is to create patterns in different standard sizes. Grading a pattern is really scaling a pattern up or down in order to adjust it for multiple sizes. Pattern sizes can be large, medium and small or else there are standard patters of size 10,12,14,16 and so on for different figure and stature sizes. This is generally how we get S M L XL XXL sizing. Pattern grading by manual method is a cumbersome task because the grader has to alter the pattern on each and every point from armhole, to neckline, sleeve cap and wrist etc.; by using CAD it is much easier and faster.

The measuring department determines the fabric yardage needed for each style and size of garment. Computer software helps the technicians create the optimum fabric layout to suggest so fabric can be used effectively. Markers made in accordance to the patterns are attached to the fabric with the help of adhesive stripping or staples. Markers are laid in such a way so that minimum possible fabric gets wasted during cutting operation. After making the garment manufacturer will get the idea of how much fabric he has to order in advance for the construction of garments. Therefore careful execution is important in this step. Computer marking is done on specialized software. In computerized marking there is no need of larger paper sheets for calculating the yardage, in fact, mathematical calculations are made instead to know how much fabric is required.

The final step before cutting is spreading. With the help of spreading machines fabric is stacked on one another in reaches or lays that may go over 100ft (30.5m) long and hundreds of plies (fabric pieces) thick.

The fabric is then cut with the help of cloth cutting machines suitable for the type of the cloth. These can be band cutters having similar work method like that of band saws; cutters having rotary blades; machines having reciprocal blades which saw up and down; die clickers similar to die or punch press; or computerized machines

that ese either blades or laser beams to cut the fabric in desired shapes.

Then the sorter sorts the patterns according to size and design and makes bundles of them. This step requires much precision because making bundles of mismatched patterns can create severe problems. On each bundle there are specifications of the style size and the marker too is attached with it.

The sorted bundles of fabrics are now ready to be stitched. Large garment manufacturers have their own sewing units while the others give the fabric on contract to other contractors. Stitching in-house is preferable because one can maintain quality control during the processing and if contractors are hired keeping eye on quality is difficult unless the contractor is one who precisely controls the process. There are what is called sewing stations for sewing different parts of the cut pieces. In this workplace there are many operators who perform a single operation. One operator may make only straight seams, while another may make sleeve insets. Yet another two operators can sew the waist seams and make buttonholes. Various industrial sewing machines too have different types of stitches that they can make. These machines also have different configuration of the frame. Some machines work sequentially and feed their finished step directly into the next machine, while the gang machines have multiple machines performing the same operation supervised by a single operator. All these factors are decisive in what parts of a garment can be sewn at that station. Finally, the sawn parts of the garment such as sleeves or pant legs, are assembled together to give the final form to the clothing.

Vocabulary Practice and Grammar Revision

4. Answer the following questions:
1. What is the first step in the garment manufacturing process?
2. What sketches does a panel of designers analyze?
3. What helps a pattern maker understand the patterns involved in the construction?
4. What is the purpose of making pattern design?
5. Why is sample making important in garment manufacturing system?
6. What will pattern production be used for?
7. What help can pattern production be constructed with?

8.   What is the purpose of grading?

9.   What step gives the garment manufacturer an idea of how much fabric to order beforehand for the construction of garments?

10.   What kind of work is done by means of spreading machines?

11.   What types of cloth cutting machines can you name?

12.   What step should be particularly precise in order to avoid serious problems?

13.   Can you describe the final sewing process before the output product is being inspected?

5. Match the following words with their definitions:

1. To design   a. to join or attach by stitches; to make, repair, etc.

(a garment) by such means;

2. To draw   b. to divide with a sharp-edged instrument; sever,

carve;

3. To grade   c. to make drawings, preliminary sketches or plans;

to plan and fashion the form and structure of an object, work of art, decorative scheme, etc;

4. To spread   d. to put or fit together the parts of;

5. To stack   e. to oversee (a process, work, workers, etc.) during

execution or performance; superintend; have the

oversight and direction of;

6. To cut   f. to arrange in a series of grades; class; sort; to

determine the grade of;

7. To sew   g. to compose or create (a picture) in lines;

8. To assemble   h. to supply for maintenance or operation, as to a

machine;

9. To feed

 i. to draw, stretch, or open out in extent, esp. over

a   flat surface, as a piece of cloth, a rolled or folded map, etc.;

10. To supervise   j. to pile or arrange in a stack; to cover or load

with something in stacks or piles

6. Ask General and Alternative questions to the following sentences:
1. First the designer draws many sketches.
2. They finally select few of them.
3. The production pattern will be used for huge production of garments.
4. Markers are attached to the fabric with the help of adhesive stripping or staples.
5. Fabric is stacked on one another with the help of spreading machines.
6. The sorted bundles of fabrics are now ready to be stitched.
7. Many operators perform a single operation only.
8. Each machine performs a separate operation.

7. Form the Comparative and Superlative degrees of comparison to the following adjectives:
Model: Easy – easier – the easiest
                        Precise – more precise – the most precise.
Rough, important, light, thin, cumbersome, possible, careful, large, rotary, severe, preferable, difficult, dry, thick, wet, stuffy, empty.

Language Development

8. Read the text again. Complete the plan of the text in writing.
9. Retell the text according to your plan using the following phrases:
- The text is about/ provides information on …
- The main objective/purpose/aim of the text is …
- The text discusses/deals with/emphasizes …
- A detailed description is given to …
- Finally …

THE STEP-BY-STEP PROCESS OF GARMENT MANUFACTURING PART 2

Pre-reading
1. Vocabulary:
Improper – неподходящий, неправильный

To crease – мяться
Erroneous – ошибочный
Adversely – неблагоприятно
Moisture – влажность
To pleat– делать складки; плиссировать
To mold – делать по образцу
A wrinkle – морщина, складка
A snap – кнопка (для одежды)
Apparel – одеяние
Yarn – пряжа, нить
Fastness – прочность
Tension – натяжение; упругость
A dye – краска
To deteriorate – ухудшать
To notch – зарубать, делать метку
A stain – пятно
Inappropriate – неподходящий
A trimming – отделка
Retail – розничный

Reading

2. Read and translate the text:

Open seams, wrong stitching techniques, non-matching threads, and missing stitches, improper creasing of the garment, erroneous thread tension and raw edges are some of sewing defects which can affect the garment quality adversely. During processing the quality control section needs to check each prepared article against these defects.

The next operations are those of finishing and/or decorating. Molding can be done to change the finished surface of the garment by applying pressure, heat, moisture, or certain other combinations. Pressing, pleating and creasing are the basic molding processes. Creasing is mostly done before other finished processes like that of stitching a cuff are. Creasing is also done before decorating the garment with something like a pocket, appliques, embroidered emblems etc. Vertical and form presses are automated machines performing simple pressing operations such as touching up wrinkles in knit shirts, around embroidery and snaps, and at difficult-to-reach places on garments.

For the textile and apparel industry product quality is calculated in terms of quality and standard of fibers, yarns, fabric construction,

color fastness, designs, and the final finished garments. Quality control in terms of garment manufacturing, pre-sales and post sales service, delivery, pricing etc. are essential for every garment manufacturer, trader or exporter. Certain quality related problems often seen in garment manufacturing like sewing, color, sizing or garment defects should never be overlooked.

Sewing defects

Open seams, wrong stitching techniques, non-matching threads, missing stitches, improper creasing of the garment, erroneous thread tension and raw edges are some of the sewing effects that can affect the garment quality adversely.

Color defects

Variation of color between the sample and the final garment, wrong color combinations and mismatching dyes should always be avoided.

Sizing defects

Wrong gradation of sizes, difference in measurement of various parts of a garment like sleeves of XL size for body of L size garment can deteriorate the garments beyond repair.

Garment defects

Broken or defective garments, snaps, stitches, different shades within the same garment, dropped stitches, exposed notches and raw edges, fabric defects, holes, faulty zippers, hanging or loose sewing threads, misaligned buttons and holes, missing buttons, needle cuts or chews, pooled or loose yarn, stains, unfinished buttonhole, short zippers, inappropriate trimmings etc. all can lead to the end of a brand name even before its establishment.

And the ultimate step in this long process is packing. The finished garments are finally sorted on the basis of design and size and packed to be sent for distribution to the retail outlets.

Vocabulary Practice and Grammar Revision

3. Answer the following questions:

1. What sewing defects affect the garment quality most negatively?

2. What operations of garment pressing and finishing can you name? Describe them.

3. What quality control operations are involved in the final inspection process?

4. What sewing defects can you enumerate?

5. What color defects should always be avoidable?

6.　　　　What defects can blur the garments beyond repair?

7.　　　　Give the examples of garment effects that presumably can destroy a career even at the beginning?

8.　　　　What is the final step of garment manufacturing process?

4. Match the following words with their definitions:

- Applying　　　　　　　　a. to furnish or adorn with something ornamental or

　　becoming; embellish;

- Molding　　　　　　b. to complete and perfect in detail; put the final

　　　　　　　　　touches on, to put a finish on something;

- Pressing　　　　　　c. to double cloth or the like upon itself and press,

　　　　　　　　　stitch

　　or otherwise, fasten in place; fold or arrange in

　　pleats;

- Pleating　　　　　　d. to make use of as relevant, suitable, or pertinent;

　　　　　　　　　to put to use, esp. for a particular purpose;

- Creasing　　　　　　e. to act upon with steadily applied weight or force;

　　　　　　　　　to flatten; make smooth;

- Decorating　　　　　　f. to work into a required shape or form; shape;

- Finishing　　　　　　g. to make a crease, or creases in or on; wrinkle

5. Ask Special Questions to the following sentences:

1. Some sewing defects can affect the garment adversely.

2. During processing the quality control section needs to check each prepared article against the defects.

3. Molding may be done by applying pressure, heat, moisture or some other combination.

4. Pressing, pleating and creasing are the basic molding processes.

5. The task of such automated machines like vertical and form presses is to perform pressing operations.

6. Product quality is calculated in terms of quality and standard

of fibers, yarns, fabric construction, color fastness, designs and the final finished garments.

7. Both for the textile and apparel and for any garment manufacturer, trader or exporter certain quality control related problems should never been overlooked.

8. Retail outlets receive the finished garments for further distribution.

6. Put in the appropriated words into the gaps:

Paper, online, source, also, other, natural, on, used, charity, poorer, sorted, about, clothing.

Old, unwearable clothing can be … for quilts, rags, rugs, bandages, or many other household uses. It can be also be recycled into ... . In Western societies, used clothing is often thrown out or donated to … (such as through a clothing bin). It is … sold to consignment shops, dress agencies, flea markets, and in … auctions. Used clothing is also often collected … an industrial scale to be … and shipped for re-use in … countries. There are many concerns … the life cycle of synthetics, which come primarily … petrochemicals. Unlike … fibers, their … is not renewable and they are not biodegradable.

Language Development

7. Read the text again. Write out the keywords of the text.

8. Think of the most suitable headings for each paragraph. Put them down.

9. Make the plan of the text and give the information of it orally.

MODULE 8

RECENT DEVELOPMENTS IN GARMENT MANUFACTURING

Pre-reading

1. Vocabulary:
Prominent – выдающийся
Fluency – плавность
Precision – точность
Laborious – трудоемкий; трудолюбивый
A swatch – образец

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A retrieval– возвращение, исправление
To customize– выполнять по индивидуальному заказу
A delay – задержка

Reading

2. Read and translate the text:

CAD and CAM are two technologies that have made prominent changes in the way garment manufacturing was used to be done in previous eras. Today all large garment manufacturing companies have developed CAD/CAM system in order to do the process of garment manufacturing because of the ease of designing patterns, fluency and precision involved which cannot be guaranteed with the manual method. Investing once into the CAD/CAM unit is worth by itself. Many buyers around the world prefer manufacturers who are using CAD/CAM methods. The production patterns, for example, created in CAD/CAM can be stored easily and they can be modified at any point of time. It is no longer enough to be able to simply print fabric digitally; the industry is demanding color matching and management throughout the design workflow, from drawing, scanning and digital photography; to calibrated monitors creating output files using spectrophotometers; through to printing, finishing, and garment assembly. CAD is an abbreviation for computer-aided design and CAM is for computer-aided machine. So, CAD/CAM is computer software that controls the production of garments. In CAD the designer designs the garments by using any suitable software like Adobe Photoshop, Adobe Illustrator, Corel Draw etc. and in CAM the cutters, sewers, graders and makers control the process of development. The designer creates 2-D or 3-D model of design in CAD and CAM as software numerically controls the machines that generate the production.

Here are several advantages of CAD/CAM over the manual method of designing and production of garments:

- The expenses and time are reduced in a considerable manner when compared to the laborious manual work of design.

- Designing can be done from anywhere as the designers are able to control the process from remote locations as well.

- The data can be easily stored, transmitted and transported through computer files.

- Digital swatches can be saved on floppy disks, zip disks, CD-ROM or hard drive thus saving space. Moreover they can be easily organized for fast and easy retrieval.

- The designs can be easily customized and personalized as cor-

rections and editing can be done at any time without unwilling delays or cost increases.

- The designers do not need to produce swatches all the time as they can now see how a particular fabric or garment looks in different colors and shapes on computer screen itself.

Both technical developments and perceptions about the technology have evolved to a degree that all these applications for apparel production are truly possible.

Vocabulary Practice and Grammar Revision

3. Answer the following questions:

1.   What new technologies have made a recent, radical change in garment manufacturing process?

2.   Why do modern garment manufacturers employ them in their production?

3.   What does CAD system mean?

4.   What does CAM system mean?

5.   What is the difference in the CAD/CAM usage?

6.   What are the advantages of CAD and CAM technologies in the garment production?

7.   What do the "digital" swatches mean?

8.   Why is there no need any longer for designers to produce numerous swatches of clothing?

4. Make disjunctive or tag questions to the following sentences:

1. CAD and Cam technologies have made prominent changes in Garment Manufacturing.

2. Currently computer software controls the production of garments.

3. In CAD the designer designs the garments by using any suitable software like Adobe Photoshop and others.

4. In CAM cutters, sewers, graders and markers control the process of development.

5. The process can be controlled from remote locations.

6. The data are stored, transmitted and transported by means of computer files.

7. Neither considerable delays nor cost increases are expected to take place during design correction making and editing.

8. The designers had to produce numerous swatches to see how fabric or garments looked in different colors and shapes.

5. Check your knowledge of English Grammar usage:

1. The workers have just ….. their work. They are now going home.

    a. complete
    b. completing
    c. completed
    d. completes

2. They managed to perform the task ….. .

    a. itself
    b. themselves
    c. himself
    d. them

3. Ann found the lost button while she ….. for some papers in the drawer.

    a. is looking
    b. was looking
    c. has been looking
    d. had been looking

4. This coat is ….. than the one Peter is wearing.

    a. thick
    b. as thick as
    c. thicker
    d. thickest

5. My sister is very fussy ….. her clothes.

    a. about
    b. on
    c. with
    d. off

6. This dress ….. by my mother.

    a. knitted
    b. was knitted
    c. knitting
    d. would knit

6. Read and translate the text without a dictionary. Ask sequential questions to it:

APPAREL DESIGN AND PRODUCTION TECHNOLOGY IN GARMENT SECTION

The garment industry is based on fashion and invariably goes through short fashion cycles. To survive in the market, there have to be regular innovations in color, style, device, fabric, finish and fit. Automated machinery and Information Technology solutions are keys in such a scenario to be competitive and improve business results.

The growth of garment industry in terms of technology adoption can be traced from pedal operated machines in the 60s. The industry moved on to power-operated machines and steam presses in the mid-80s, started assembly line manufacturing in the late 80s and then entered the phase of using computerized machines. The industry saw a rapid change with the introduction of computerization in the garment industry.

Automated machines for cutting, sewing, buttonholes, CAD/CAM for pattern making, etc., have brought down the cost of production considerably. As a result, garment companies now focus on technology to be productive and cost effective at the same time. In terms of advancements in automation, present generation machines have under bed trimmers, which stitch and trim excess thread simultaneously. This means a huge saving on threads and excess manpower, besides this there are automated machines for stitching collars and cuffs, as well as finishing, and pressing machines, etc.

Language Development

7. Speak about the changes new technologies brought into the garment production industry.

8. Describe the main advantages of CAD/CAM systems over the manual method of designing and production of garments.

MODULE 9

TEXTILE INDUSTRY HISTORY

Pre-reading

1. Do you agree with these sayings?

1. Those who do not study are only cattle dressed up in men' clothes.

2. A pretty face and clothes do not make character.

2. Vocabulary:
To employ – нанимать
A pheasant – фазан
Flax – лен
Lucrative – выгодный, доходный, прибыльный
A merchant – купец
A craftsman – ремесленник
A mulberry – шелковица, тутовое дерево

To abound – быть в большом количестве, изобиловать
To swirl – обвивать
Worsted– ткань из гребенной шерсти, камвольная ткань
To teasel– ворсить
A guild – цех; организация, союз
Rural – сельский
A hammer – молоток
A wheel – колесо
Benign – благотворный, мягкий

Reading

3. Read and translate the text:

Between 1450 and 1800, textile production was second only to agriculture in economic importance. It employed more people and made more profit than any other manufactured product. Production and trade existed at two levels. Everywhere peasants and villagers turned locally grown wool and flax into fabric and clothing for themselves and their neighbors. The cloth they produced was of poor quality and not designed for export to distant markets. On top of this local market sat a large and lucrative luxury trade in silk, wool, linen, and (eventually) cotton fabric, the most important of which were heavy woolens. The customers for these fabrics were wealthy landowners, government and church officials, merchants, financiers, aristocrats, and master craftsmen in Europe, Asia and the Levant.

Ireland and the Baltic region supplied much of Europe's flax, although it was widely grown and available. In the 16th century Venice and other Italian cities acquired silkworms and mulberry trees, and began silk manufacturing. From there the silk industry made its way north to Holland, Zurich, Lyon, Cologne, and England. At the same time cotton thread and fabric began to arrive from India and became widely popular.

Most important of all the textile industries was the trade in raw wool and wool fabric. Sheep breeding abounded everywhere. In the 15th century the best fleeces came from England. In the 16th century Spanish merino sheep knocked English sheep into second place. French sheep were considered to produce the third best wool. Two types of woolen fabric were produced in Europe – woolens and worsteds. Of the two, the market for woolens was by far the larger. Woolens were made from short-staple wool fibers that were swirled together before spinning. The cloth had a soft-textured appearance and feel. Worsteds were made from long-staple wool and had a hard-

er, smoother finish. Soft woolens were far more desirable in the market than the harsher worsteds and dominated the wool trade.

In the 15th century textile manufacturing was an urban industry controlled by wealthy merchants (drapers) who purchased raw wool, had it turned into cloth and then sold it often to other craftsmen who performed the final finishing steps including dyeing and getting it teasel. These were capital-intensive crafts and cloth merchants often preferred not to be involved in them. Before the 17th century most English cloth was dyed and finished in Holland. In England in addition to merchants who only bought and sold clothiers themselves often master weavers controlled a great deal of the woolen trade.

In the 15th and 16th centuries textile workers dominated the population of towns like Venice and Leiden. By the 16th century, however, merchants had discovered that they could avoid the high wages, labor shortages, and quality controls imposed by urban guilds and governments by hiring peasants to do manufacturing work in their homes. Urban merchants continued control production but much of the work force was spread out through the countryside. Alternately referred to as the putting out system cottage manufacturing and the Verlag system, merchants (Verlagers) found they could save money (rural workers could work for less payment but could be as skilled as urban workers) and increase production at the same time. The high end woolen trade remained important but many merchants began to reorient their businesses away from the luxury market toward lower quality, lower priced, and more rapidly produced goods.

The building of fulling mills (first mentioned in accounts c. 1000) that beat the woven cloth with hammers raised by water wheels to replace the labor intensive hand (or foot) fulling provided another incentive for merchants to put work out into the countryside and was a major determinant of the location of woolen production. In the 18th century when merchants expanded employment to increase production many rural villages became as much or even more dependent on the textile industry as they were on farming. Historians now call this intensification of cottage industry protoindustrialization to distinguish it from its earlier, perhaps, more benign manifestation when cottage workers toiled fewer hours for producing goods for local markets.

Vocabulary Practice and Grammar Revision

4. Answer the following questions:
1. At what levels did production and trade exist in the years

from the 15th to 17th centuries?

2. What kind of textile was supplied to the countries of Europe? What countries from?

3. What types of wool fabric were produced in the 16th century?

4. Who controlled an urban industry in that period?

5. Why did cloth merchants prefer not to be involved in the final finish step?

6. What had merchants discovered by the 16th century?

7. What provided another incentive for merchants to put work out into the countryside?

8. What period of time do historians call proto-industrialization? Why?

5. Fill in the gaps in the following sentences with appropriate words:

Passed, soaps, at least, complicated, short, while, raw, converted, dunking, cloth, and.

1. Turning raw wool into fabric was a long ….. process.

2. It was common to dye fabric after it was dried rather that when the wool was……

3. After breaking, cleaning and oiling, the wool ….. into the hands of combers and carders.

4. Combers ….. a mass of tangled, curling wool into long, straight, smooth fibers for worsteds by combing.

5. The task of carders was to convert wool into a ball of ….. wool fibers for woolens by carding.

6. Wheel-spun yarn was wound onto bobbins ….. used for the weft.

7. Once the woolen cloth was woven, it passed into the hands of fullers who cleaned and softened it by ….. it in water.

8. The water contained various kinds of detergents and ….. that dissolved and absorbed the fat that had been added to the wool d before it was combed and carded.

9. Fullers placed the folded cloth in a vat and trod on it with their feet, periodically removing and refolding the ….. so it would be evenly fulled.

10. The entire process involved twenty people (not including dyers) for each piece of cloth produced and took at ….. six weeks.

11. Women worked as carders, combers and spinners, ….. men performed most of the other tasks.

6. Match the countries with the activities that took place there.

Wealthy landowners, government and church officials, merchants, financiers, aristocrats and master craftsmen were the main customers in …

Much of Europe's flax was supplied by…

In the 16th century silk manufacturing began in …

The silk industry made its way north …

Cotton thread and fabrics began to arrive from …

Most English cloth was dyed and finished …

Textile workers dominated the population of towns like ……

a. ….. India.

b. ….. Europe, Asia, and the Levant.

c. ….. Venice and Leiden

d. ….. Holland, Zurich, Lyon, Cologne and Spitalfields (East London)

e. ….. Venice and other Italian cities

f. ….. Ireland and the Baltic region

g. ….. England

Language Development

7. Read the text again. Write down the key words of the text.

1. Make an annotation of the text in writing using the following phrases.

MODULE 10

TEXTILE SOURCES AND TYPES

Pre-reading

1. Divide the following words into two groups:

metal   plastic   wood   rubber

glass   leather   wool   petrol

paper   nylon   wax   cotton

Bio-degradable: _____

Non-bio-degradable: _____

2. Vocabulary:

Jute – джут

To supplement – пополнять, добавлять
Gossamer – тонкая ткань, газ
A strand – прядь
To distinguish (from) – отличаться от
To crimp – гофрировать, завивать
To comb – расчесывать
A muskox – овцебык, мускусный бык
Smooth – гладкий
Atwine – бечевка, шнурок; скручивание, сплетение
A tile – кафель, изразец
To stuff– набивать, заполнять
A blend – смесь, смешение
Nettles – крапива
A stalk – стебель
To derive (from) – происходить
Reinforcement – укрепление
Retardant – запоздалый
Poultry – домашняя птица
A replacement – замена
To impede – препятствовать, мешать, затруднять
To wick (away) – плести

Reading

3. Read and translate the text:

Textiles can be made from many materials. These materials come from four main sources: animal (wool, silk), plant (cotton, flax, jute), mineral (asbestos, glass fiber), and synthetic (nylon, polyester, acrylic). In the past all textiles were made from natural fibers including plant, animal, and mineral sources. In the 20th century these were supplemented by artificial ones made from petroleum. Textiles are made in various strengths and degrees of durability, from the finest gossamer to the sturdiest canvas. Microfiber refers to those made of strands thinner than one denier.

Animal Textiles

Animal textiles are commonly made from hair, fur, skin or silk (in the silkworm's case).

Wool refers to the hair of the domestic goat or sheep which is distinguished from other types of animal hair in that the individual strands are coated with scales and tightly crimped, and the wool as a whole is coated with a wax mixture known as lanolin (sometimes called wool grease) which is waterproof and dustproof. Woollen refers

to a bulkier yarn produced from carded, non-parallel fiber while worsted refers to a finer yearn spun from longer fibers which have been combed to be parallel. Wool is commonly used for warm clothing. Cashmere, the hair of the Indian cashmere goat, and mohair, the hair of the North African angora goat, are types of wool known for their particular softness.

Other animal textiles which are made from hair or fur are alpaca wool, vicuna wool, llama wool, and camel hair generally used in the production of coats, jackets, ponchos, blankets, and other warm coverings. Angora refers to the long, thick, soft hair of the angora rabbit. Qiviut is the fine inner wool of the muskox.

Wadmal is a coarse cloth made of wool produced in Scandinavia mostly in 1000-1500 CE.

Silk is an animal textile made from the fibers of the cocoon of the Chinese silkworm which is spun into a smooth fabric prized for its exquisite softness. There are two main types of the silk: 'mulberry silk' produced by the Bombyx Mori, and 'wild silk' such as Tussah silk. Silkworm larvae produce the first type if cultivated in habitats with fresh mulberry leaves for consumption, while Tussah silk is produced by silkworms feeding purely on oak leaves. Around four-fifths of the world's silk production consists of cultivated silk.

Plant textiles

Grass, rush, hemp, and sisal are all used in making rope. In the first two the entire plant is used for this purpose, while in the last two only fibers from the plan are utilized. Coir (coconut fiber) is used in making twine, and also in floor mats, doormats, brushes, mattresses, floor tiles, and sacking.

Straw and bamboo are both used to make hats. Straw, a dried form of grass, is also used for stuffing, as is kapok.

Fibers from pulpwood trees, cotton, rice, hemp, and nettle are used in making paper.

Cotton, flax, jute, hemp, modal and even bamboo fiber are all used in clothing. Pina (pineapple fiber) and ramie are also fibers also used in clothing generally with a blend of other fibers such as cotton. Nettles have also been used to make a fiber and fabric very similar to hemp or flax. The use of milkweed stalk fiber has also been reported but it tends to be somewhat weaker than other fibers like hemp or flax.

The inner bark of the lacebark tree is fine netting that has been used to make clothing and accessories as well as utilitarian articles such as rope.

Acetate is used to increase the shininess of certain fabrics such

as silks, velvets, and taffetas.

Seaweed is used in production of textiles: a water-soluble fiber known as alginate is produced and is used as a holding fiber; when the cloth is finished, the alginate is dissolved leaving an open area.

Lyocell is a synthetic fabric derived from wood pulp. It is often described as a synthetic silk equivalent; it is a tough fabric that is often blended with other fabrics – cotton, for example.

Fibers from the stalks of plants, such as hemp, flax, and nettles are also known as 'bast'fibers.

Mineral textiles

Asbestos and basalt fiber are used for vinyl tiles, sheeting, and adhesives, "transit" panels and siding, acoustical ceilings, stage curtains, and fire blankets.

Glass fiber is used in the production of ironing board and mattress covers, ropes and cables, reinforcement fiber for composite materials, insect netting, flame-retardant and protective fabric, soundproof, fireproof, and insulating fibers. Glass fibers are woven and coated with Teflon to produce beta cloth, a virtually fireproof fabric which replaced nylon in the outer layer of United States space suits since 1968.

Metal fiber, metal foil, and metal wire have a variety of uses including the production of cloth-of-gold and jewelry. Hardware cloth (US term only) is a coarse woven mesh of steel wire used in construction. It is much like standard window screening but heavier and with a more open weave. It is sometimes used together with screening on the lower part of screen doors to resist scratching by dogs. It serves similar purposes as chicken wire, such as fences for poultry and traps for animal control.

Synthetic textiles

All synthetic textiles are used primarily in the production of clothing.

Polyester fiber is used in all types of clothing either alone or blended with fibers such as cotton.

Aramid fiber (e.g. Twaron) is used for flame-retardant clothing, cut-protection, and armor.

Acrylic is a fiber used to imitate silk; it is used for production of pantyhose. Thicker nylon fibers are used in rope and outdoor clothing.

Spandex (trade name Lycra) is a polyurethane product that can be made tight-fitting without impeding movement. It is used to make active wear, bras, and swimsuits.

Olefin fiber is a fiber used in active wear, linings, and warm clothing. Olefins are hydrophobic allowing them to dry quickly. A sin-

tered felt of olefin fibers is sold under the trade name Tyvek

Ingeo is a polylactide fiber blended with other fibers such as cotton and used in warm clothing. It is more hydrophilic than most other synthetics allowing it to wick away perspiration.

Lurex is a metallic fiber used in clothing embellishment.

Milk proteins have also been used to create synthetic fabric. Milk or casein fiber cloth was developed during World War 1 in Germany, and further developed in Italy and America during the 1930s. Milk fiber fabric is not very durable and wrinkles easily but has a pH similar to human skin and possesses anti-bacterial properties. It is marketed as a biodegradable, renewable synthetic fiber.

 Carbon fiber is mostly used in composite materials, together with resin such as carbon fiber reinforced plastic. The fibers are made from polymer fibers through carbonization.

Vocabulary Practice and Grammar Revision

4. Answer the following questions:
1.	What various materials are textiles made from?
2.	What kind of material was developed in the 20th century?
3.	What materials animal textiles are made from? What are they used for?
4.	What plant textiles are used for clothes?
5.	Are mineral textiles used for clothing production? How?
6.	All synthetic textiles are used mainly in the clothing production, are not they? Name and describe them.
7.	What fiber cloth was first developed in Germany and afterwards in America and Italy?
8.	What can you say about the process of carbonization?

5. Match the two parts of the following sentences:
1. A textile or cloth is a flexible material consisting …
2. Textiles are formed by weaving, knitting, crocheting …
3. The words fabric and cloth are used in textile assembly trades (such as tailoring and dressmaking) …
4. Textile refers to any material …
5. Fabric refers to any material made through weaving, knitting, spreading, crocheting, or bonding that may be …
6. Cloth may be used synonymously with fabric but often refers to …

7. The discovery of dyed flax fibers in a cave in the Republic of Georgia dated to 34 000 BCE suggests …

8. The production of textiles is a craft whose speed and scale of production has been altered almost …

9. For the main types of textiles, plain weave, twill, or satin weave, there is still …

a. … a finished piece of fabric used for a specific purpose (e.g. table cloth).

b. … beyond recognition by industrialization and the introduction of modern

technological techniques.

c. … of a network of natural or artificial fibers (yarn or thread).

d. … made up of interlacing fibers.

e. … textile-like materials were made even in prehistoric times.

f. … by weaving, knitting, crocheting, knotting, or felting.

g. … little difference between the ancient and modern methods.

h. … as synonyms for textiles.

i. … used in production of further goods (garments, etc.).

6. Match the following groups of adjectives with the most likely noun:

1. cotton, woolen, woolly   a. hand-bag

2. leather, denim, sheepskin   b. stock-ings

3. leather, plastic, snakeskin   c. jump-er

4. silk, nylon   d. jacket

7. Match the materials with the objects:

1. a diamond   a. jacket
2. a suede   b. ring
3. a pearl   c. band
4. a silk   d. necklace
5. a rubber   e. scarf

Which one of the following collocations is wrong?

pure gold
pure leather
pure silver
pure silk
pure wool

Do you know the correct way to say it? (a l e r   t e l r h e a)

Language Development

1. Read the text again. Write out the key words of the text.

2. In pairs, discuss your preferences as to the characteristics and quality of this or that type of fabric.

MODULE 11

CONTEMPORARY CLOTHING

Pre-reading

1. Do you know what the following words 'hanbok', 'tupenu', 'salopette' mean?

2. Vocabulary:

Affordable – то, что можно себе позволить купить

An attire – наряд, платье; украшение

To perpetuate – увековечивать, сохранять навсегда

To penetrate – проникать

Distinctive– отличный, отличительный

Garb – одеяние, наряд

Thrift – экономность, бережливость

Reading

3. Read and translate the text:

Western dress code

The Western dress code has changed over the past 500+ years. The mechanization of the textile industry made many varieties of cloth widely available at affordable prices. Styles have changed, and the availability of synthetic fabrics has changed the definition of "stylish". In the latter half of the 20th century, blue jeans became very popular, and are now worn to events that normally demand formal attire. Active wear has also become a large and growing market.

The licensing of designer names was pioneered by designers like Pierre Cardin in the 1960s and has been a common practice within the fashion industry from about the 1970s.

Spread of western styles

By the earlier years of the 21st century, western clothing styles had, to some extent, become international styles. This process began hundreds of years earlier, during the periods of European colonialism.

The process of cultural dissimilation has perpetuated over the centuries as Western media corporations have penetrated markets throughout the world, spreading Western culture and styles. Fast fashion clothing has also become a global phenomenon. These garments of mass-produced Western clothing are less expensive. Donated used clothing from Western countries is also delivered to people in poorer countries by charity organizations.

Ethnic and cultural heritage

People may wear ethnic or national dress on special occasions or in certain roles or occupations. For example, most Korean men and women have adopted Western- style dress for daily wear, but still wear traditional hanboks on the occasions like weddings and cultural holidays. Items of Western dress may also appear worn or accessorized in distinctive non-Western ways. A Tongan man may combine a used T-shirt with a Tongan wrapped skirt, or tupenu.

Sport and activity

Most sports and physical activities are practiced wearing special clothing, for practical, comfort or safety reasons. Common sportswear garments include shorts, T-shirts, tennis shirts, leotards, tracksuits, and trainers. Specialized garments include wet suits (for swimming, diving and surfing), salopettes (skiing), and leotards (for gymnastics). Also, spandex materials are often used as base layers to soak up sweat. Also, spandex is also preferable for active sports that require form fitting garments, such as volleyball, wrestling, track & field, dance, gymnastics and swimming.

Fashion

There exists a diverse range of styles in fashion, varying by geography, exposure to modern media, economic conditions, and ranging from expensive haute couture to traditional garb, to thrift store grunge.

Future trends

The world of clothing is always changing, as new cultural influences meet technological innovations. Researches in scientific laboratories have been developing prototypes for fabrics that can serve functional purposes well beyond their traditional roles, for example, clothes that can automatically adjust their temperature, repel bullets, project images, and generate electricity. Some practical advances already available to consumers are bullet-resistant garments made with Kevlar and stain resistant fabrics that are coated with chemical mixtures that reduce the absorption of liquids.

Vocabulary Practice and Grammar Revision

4. Answer the following questions:

1. What role has the mechanization played in the textile industry over the past   years?

2. What has become a common practice with the designers within the fashion industry since the 1970s?

3. What process helped Western clothing styles spread throughout the world   and in what way?

4. What does "fast fashion clothing" mean?

5. When are some items of Western dress worn or accessorized in distinctive, non-Western style?

6. What items does common sportswear clothing include?

7. How does fashion range in its styles?

8. What have researches in scientific laboratories been working on?

5. Find the Russian equivalents to the following English word combinations:

Widely available; at affordable prices; demand formal attire; was pioneered by; the process of cultural dissemination; media corporations have penetrated; donated used clothing; are also delivered … by charity organizations; have adopted … for daily wear; safety reasons; form fitting garments; a diverse range of styles; repel bullets; stain- resistant fabrics; coated with; the absorption of liquids.

Процесс распространения культуры; наносятся; также поставляются … благотворительными организациями; по доступным ценам; впервые введена; средства массовой информации проникли; облегающая (спортивная) одежда; требуют официальной одежды; в широком доступе; приняли … чтобы носить   каждый день; по причинам безопасности; поношенная одежда в виде пожертвования; отталкивать пули; впитывание жидкостей; разнообразные стили; устойчивая от пятен.

6. Translate the following word combinations into Russian and use them in your   own sentences:

1. To be in fashion –

2. To come into fashion –

….3. To be trendy/fashionable –

4. To keep up to date with the (latest) fashion –

5. To customize clothes to the (latest) fashion –

….6. To go out of fashion –

….7. To be out of fashion –

7. Fill in the gaps with the word combinations from Task 5 in the correct grammar form. You may use the words more than once.

I don't like wearing tight trousers because they are out of fashion/ not fashionable at the present moment. I prefer jeans because they ….. always ….. . I'm happy that dresses ….. again. I also look great in miniskirts, but unfortunately the mini ….. next season. Frankly speaking its hard ….. all the time. Sometimes I have ….. my old clothes ….. .

Language Development

8. Speak about the current trends in fashion. Do you agree with the statement that fashion is cyclical? Express your idea.

9. Discuss if there are any drastic changes in fashion to be expected in future or not.

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