

Fbgkkl_jkl\h gZmdb b \ukr_]h h[jZah\Zgby Jhkkbckdh
N_^_jZevgh_]hkm^Zjkl_ggh_ [x^`_lgh_ h[jZah\ZI_ev
\ukr_]h h[jZah\Zgby
©Kfhe_gkdbc]hkm^Zjkl_gguc mgb_jkbl_l^a

DZn_^jZ wdghghfdbb

«*Отверждаю*»

ljhj_dlhj ih mq_[gh
f_lh^bq_ k z hcl_
BBBBBBBBBBBB X : Mklbf_
©5^a fZ 2022]

**Рабочая программа дисциплины
Б1.В.04 Деньги, кредит, банки**

GZijZ\e_gb_ ih^]hlh\db WdhghfdbZ
GZijZ\e_gghklv ijhnbev ©NbgZgku b dj_^bl^a
NhjfZ h[mq_hgbyZ ¥
DmjB ±
K_f_kl\$,6±
<k_]h aZq_lguo5_ q Z ghb180±
NhjfZ hlq_lghklb ka_Zqklj w dkaZ_ff_gk lj

ljh]jZffm jZajZ[hIZe
d w g ^hp_gl K F KZih`gbdh\Z

H^h[j_gZ gZ aZk_^Zgbb dZn_^ju wdghghfdbb
©8^a fZ 2022]h^Z ijhlhøhe <

AZ_^mxsbc dZn?^jFZl__ \Z

Kfhe_gkd
2022

1. Место дисциплины в структуре ОП

>b k p b i e b g Z 4 @ _ g v] b d j _ ^ b p h [Z g d b l k y d q Z h j f b j m c f
 m q Z k l g b d Z f b h [j Z a h \ Z I _ e v . g u e y h r h g h i r r g b] h m k \ h _ g b y ^ Z g g h c
 g _ h [o h ^ b f h q l h [u k l m ^ _ g l \ e Z ^ h e e h \ h g g h y f o u f b b k i p b y e Z g _ e v g h c
 q Z k l b b q Z k l b f b j m c f n q Z k l g b d Z f b h [j Z a h \ Z I _ e v . g u o h j l b h q _ l g d h c
 [Z a h c ^ e y ^ b k p b i e b g u y \ e y x l k y k e _ ^ m m s o b] Z e ^ b k l p d b e b m q a _ l o b Z
 @ W d h g h f b q _ k d Z y @ d h j b y f b d Z ^ b c f u ^ _ g b _ \ k i k h x _
 >b k p b i e b g Z a z d e Z ^ u \ Z _ l n m g ^ Z f _ g l ^ e y ^ Z e v g _ c r _] h
 w d h g h f b q _ k d b o ^ b k p b i e b g b k i h e v a m x s b o j Z a e b q g u _ f _ l h
 ^ b k p b i e b g _ k e m ` Z I h k g h \ h c ^ e y b a r e Z e g h j p b b l g Z e i e l h g h [e @ ` _
 @ B g \ _ k l b p b b b b g \ _ k l b p h p h g u k e l j Z o h \ h _ a ^ _ e h g Z e b a b h p _
 [Z g d h \ k d h c ^ _ y l _ @ W g h k g b f b q _ k d b c Z g Z e b a a

2. Планируемые результаты обучения по дисциплине

Dhfi_l_gpby	Bg^bdZlhju ^hklb`_gbj
<p>ID3 ± kihkh[_g i j b f _ g y l v j _] m e b j m x s b _ [x ^ ` _ l g u _ \ Z e x l g u _ h l g h r _ g b y \ k l j Z o h \ h c [Z g d h \ k d h c m q _ l Z b d h g l j h e y</p>	<p>Знать: g h j f Z I b \ i j Z \ h \ m x [j _] e Z f _ g l b j m x [s m x _ l g u _ l j m ^ g Z e h] h \ u _ b \ Z e x l g u _ f h l l g h r b j Z k q z I Z w d h g h f b q _ k d b o - b w d h g h f b q _ k d b o i h d Z a Z I _ e d k l j Z o h \ h c [Z g d h \ k d h c ^ _ y l _ d h g l j h e y Z n _ ^ _ j Z e v g h f j _] b f b j h \ u o m j h \ g y o k i h k h [u h [j Z [h l d b w d h g h f b q _ k d b o - w d h g h f b q _ k d b o i h d Z a Z I _ e _ j Z a \ b l b y \ k l j Z o h \ h c [Z g ^ _ y l _ e v g h k l b h [e Z k d b g h j h e y Z</p> <p>Уметь: Z g Z e b a b j h \ Z I v g h j j Z I b \ e b g n h j f Z p b x i _] e Z f _ g [x ^ ` _ l g u _ l j m ^ h \ u _ g Z e h] h \ h l g h r _ g b y l h ^ b d b j Z k q z I Z w d b k h p b Z e w d h g h f b q _ k d b o i h d h [e Z k l b k l j Z o h \ h c [Z g d h \ k d m q _ l Z b d h g l j h e y Z n _ ^ _ j Z j _] b h g Z e v g h f b f b j h \ u o m j h \ g</p> <p>Владеть: g Z \ u d Z f b h k m s _ k j _] m e b j h \ Z g b y ` _ l g u o l j m g Z e h] h \ u o b \ Z e x l g u o j Z k q z w d h g h f b q _ k d b o b - w d h g h f b q i h d Z a Z I \ e h [e Z k l b k l j Z o h \ h c ^ _ y l e v g h k l b m q _ l Z b g Z n _ ^ _ j Z e v g h f j _] b h g Z e v g h f m j h \ g y o h [j Z [h l d b w d h g h k h p b Z e w d h g h f b q _ k d b o i h j _] b h g Z e v g h] h j Z a \ b k l j Z o h [Z g d h \ k d h c ^ _ y l _ e v g h k l b h d h g l j h e y</p>
<p>ID7 ± kihkh[_g h p _ g b \ Z g w i j h p _ g l g u _ b \ Z e x l g u _ i h l j _ [b l _ e v k d b f d j _ ^ b l Z f</p>	<p>Знать: h k h [_ g g h k l b b l g u o i j h p _ \ Z e x l g u o j b k d h \ i h i h d j b d j _ ^ b l Z f \ [Z g d h \ k d b o k l j m c</p>

<p>ij_^\Zjbl_ evguc]jZnbd i ihlj_[bl_ evkdbf b bihl_qg \ p_eyo dhgkmevlbjh\Zgby</p>	<p>dhgkmevlbjh\Zgby deb_glh\ Уметь: hp_gb\Zlv dj_^blgu_ i \Zexlgu_ jbkdb ih ihlj_ dj_^blZf jZkkqblu\Zlv ij_]jZnbd ieZl_`_c ih ihlj_[b bihl_qguf dj_^blZf \ dhgkmevlbjh\Zgby deb_glh\ Владеть: f_lh^Zfbh_z_gb\Zlv dj_ ijhp_glguc_ b \Zexlgu_ ihlj_[bl_ evkdbf dj_^blZf j ij_^\Zjbl_ evguc]jZnbd ie ihlj_[bl_ evkdbf b bihl_qguf p_eyo dhgkmevlbjh\Zgby deb</p>
--	---

3. Содержание дисциплины

Сущность, функции и роль денег в условиях рыночной экономики. Виды денег и их особенности.

G_h[oh^bfhklv b ij_^ihkuedb \hagbdgh_gby b i
Hkgh\gu_ dhgp_ipbb h[tykgyxsb_ ijhbko`^_gb_ ^_g_] b
wdhghfbq_kd]hg b dZl_h\Zjgh_ ijhbko`^_gb_ ^_g_] b
^_g_] lhgylb_ nmgdpbc ^_g_] Nmgdpby ^_g_] dZd f_ju klh
\ nmgdpbb f_ju klhbfbklb \ ohayckl_gguf h[hjhl_ Nmgdp
Kh^_j`Zgb_ b gZagZlqcg b mgdZpbb >\b`_gb_ ^_g_] b lh\Z
\ebyxsb_ gZ kn_jm bkihevah\Zgby ^_g_] \ nmgdpbb kj^k
kj^kl\Z ieZl_`Z lhgylb_ jheb ^_g_] Jhev b jZa\blb_ ^_g_

Денежный оборот и его структура.

ohayckl_gguc h[hjhl Dj_^blguc oZjZdl_j kh\jkb b ggwcb kky
[_agZebqguo ^_g_] Hj]ZgbaZpby wfbkkbhgguo hi_jZpbc
[Zgdh\kdh]h ^_ihablgh]h fmevlbie`dZ_lhgZy gZebqguo dZ
^_g_] k ^jm]bfb wdhghfbq_kdbfb dZl_]hjbyfb >_gv]b b lh\Z
nbgZgku >_gv]b **Денежная система страны, генезис ее развития.** lhgylb_ ^_g_`ghc
kbkl_fu OZjZdlb dZ ^_g_`ghc kbkl_fu b nhjf __ jZa\blby Lbi
Kbkl_fZ f_lZeebq_kdh]h h[jZs_gby ;bf_lZeebaf fhghf_lZee
Kbkl_fZ h[jZs_gby dj_^blguo b [mfZ`guo ^_g_] __ oZjZ
^_g_`ghc kbkl_fu b bo oZjZdlb dZ ^_g_`ghc kbkl_fu b nhjf __ jZa\blby Lbi

Денежная система страны, генезис ее развития.

Kmsgghklv b nhjfu ijhy\e_gby bgneypbb A
bgneypbhgg]h ijhp_kkZ Hkgh\gu_ nZdlhju b lbiu bg
wdhghfbq_kdb_ ihke_`kl\by bgneypbb <ebygb_ bgneypbb gZ
f_`^mgZjh^gu_ wdhghfbq_kdb_ hlghr_gby J_]Vale`j]h`Zgb_
Валютные отношения и валютная система. lhgylb_ b dZl_]hjbb \Zexlguo hlghr_gb
kbkl_fu <b^u b we_f_glu \Zexlguo kbkl_f GZpbhgZevg
F_`^mgZjh^gZy fbjhgZy kZek_fZ b wlZiu __ w\hexpbb ?\jih
kbkl_fZ ljh[e_fu b i_jki_dlb\ u jZa\blby j_]bhgZevguo \Zex
deZkkbnbdZpby \Zexl

Сущность, формы, виды и роль кредита в экономике. Ссудный процент и его роль.

G_h[oh^bfhklv lZdj_`bl[s_wdhghfbq_kdb_ b ki_pbnbq_kd
nmgdpbhgbjh\Zgby dj_^blguo hlghr_gbc Lh\Zjgh_ ijhbko`^_gb_ ^_g_] b
hkgh\Z \hagbdgh_gby dj_^blZ djm]hh[hjhl b h[hjhl dZi
dj_m]hh[hjhlZ b h[hjhl **Кредитно-банковская система.** lhgylb_ dj_^blgh
kbkl_fu KljmdlmjZ dj_^blghc kbkl_fu DeZkkbnbdZpby a\
jZa]jZgbq_gb_ bo ^_yl_ evghklb ;Zgdh\kdZy kbkl_fZ dZd
kbkl_fu We_f_glu [Zgdh\kdZy kbkl_fZ dZd **Центральные банки и основы их**

деятельности. P_gljZevguc [Zgd b _]h klZImk P_eb b aZ^Zqb hj
[Zgdh\ Ihgylb_ g_aZ\bkbfbhklb p_gljZevguo [Zgdh\
hij_^_eyxs_b_Hj]ZgbaZpbhggZy b mijZ\e_gq_kdZy kljmdlm
p_gljZevguc ZiiZjZl ^_iZjZfgyu h mizve_jZk_khg_b_ p_glju
^jm]b_ ih^jZa^_e_gby bo nmgdpbb b jhev Nmgdpbb p_gljZe
Коммерческие банки и их деятельность. Kmsgghklv b ijbgbpiu ^_yl_e
dhff_jq_kdbo [Zgdh\ \ mkeh\byo jughqqghc wdhghfbd_b_kkdb_o [Zgdh\
bo hj]ZgbaZpbhggZy b mijZ\e_gq_kdZy kljmdlm jZblgh]h ijh
dhff_jq_kdhf [Zgd_ Kh^_j`Zgb_ aZdexq_gb_ b bkiheg_g
NbgZgkh\u_ jbkdb \ ^_yl_evghklb dhff_jq_kdh]h [ZgdZ
f_g_^`f_glZ b fzjZ_kbZbfhhghr_gby [Zgdh\ k hj]ZgZfb jhkm^
k p_gljZevguf [Zgdhf kljZgu f_`^mgZjhj^gubfgufbgZgkh^_gby
Dhff_jq_kdb_ [Zgdb Jhkkbckdhc N_^_jZpbb \ kh\j_f_gguo mk

4. Тематический план

№	Тема	конт.	конт.			
			лекц.	семинар.	самост.	итого
1.	Кmsgghklv nmgdpbb \ mkeh\byo jughqqghc <b^u ^_g_] b bo hkh	12	2	2	8	
2.	>_g_`guc h[hjhl b _]	14	4	2	8	
3.	>_g_gZy kbkl_fZ]_g_abk __ jZa\blby	14	4	2	8	
4.	Bgneyppy nhjfu __ b f_lh^u j_]mehjh\Zg	14	4	2	8	
5.	<Zexlgu_ hlghr_gby kbkl_fZ	14	4	2	8	
6.	Kmsgghklv nhjfu \b^ dj_^blZ \ wdhghfbd_ ijhp_gl b _]h jhev	14	4	2	8	
7.	;Zgdh\kdZy kbkl_fZ we_f_glu	14	4	2	8	
8.	P_gljZevgu_ [Zgdb b ^_yl_evghklb	12	2	2	8	
9.	Dhff_jq_kdb_ [Zgdh ^_yl_evghklv	45	5	33	7	
	\k_]h	153	33	49	71	
	КОНТРОЛЬ	27			27	
	ИТОГО	180	33	49	98	

5. Виды образовательной деятельности

Занятия лекционного типа

Тема 1. «Сущность, функции и роль денег в условиях рыночной экономики. Виды денег и их особенности»

- G_h[oh^bfhklv kms_kl\h\Zgby ^_g_] ij_^ihkuedb \hagbd ^_g_] dhgp_ipbb ijhbko]h`^_gby ^_g_
- Nmgdpbb ^_g_] bo hkh[_gghklb b oZjZdl_jbkldbZ
- Jhev b jZa\blb_ ^_g_] \ mkeh\byo jughqqghc wdhghfbd

4. L_hjbb ^_g_] bo w\hexpby
5. <b^u ^_g_] bo hkh[_gghklb

Тема 2. «Денежный оборот и его структура»

1. <uimkd ^_g_] \ ohaуckl_gguc h[hjhl b wfbkkby
2. Kmsgghv b f_oZgbaf [Zgdh\kdh]h ^_ihablgh]h fmevlbiebdZ
3. Ihgylb_ ^_g_`gh]h h[hjhlZ b \b^u ^_g_`gh]h h[jZs_gby
4. GZebqhg_`guc h[hjhl b ^_g_`gh_ h[jZs_gb_
5. ;_agZebqguc ^_g_`guc h[hjhl _]h oZjZdl_jbklbdZ
6. Kbkf_fZ [_agZebqguo jZkq_lh\ lu hkhjfu ug[_agZebqguo jZkq_lh\
7. AZdhgu ^_g_`gh]h h[jZs_gby b bo hkh[_gghklb >_g_`gZy f ^_g_`gZy [ZaZ

Тема 3. «Денежная система страны, генезис ее развития»

1. Ihgylb_ b ijbqbgу ihу\e_gby ^_g_`ghc kbkl_fu]hkm^Zjkl\Z
2. Lbiu ^_g_`ghkd_fu bo oZjZdl_jbklbdZ
3. Kbkf_fZ f_lZeebq_kdh]h h[jZs_gby [bf_lZeebaf b fhghf_lZeebaf b_]h jZagh\b^ghklb
4. Hkgh\gu_ q_jlu kbkl_fu h[jZsdgby [guf`_g_hg_]
5. We_f_glu ^_g_`ghc kbkl_fu]hkm^Zjkl\Z bo oZjZdl_jbklbdZ
6. >_g_`gZykl_fZ Z^fbgbk_lZfZ`ghc wdhghfbbd __ oZjZdl_jbklbdZ
7. >_g_`gZy kbkl_fZ jughgghc wdhghfbbd __ oZjZdl_jbklbdZ
8. ljZ\h\u_ hkgh\u nmgdpbhgbjh\Zgby kh\j_f_gghc ^_g_`ghc N_^_jZpbb

Тема 4. «Инфляция, формы ее проявления и методы регулирования»

1. Kmsgghklv b ijbqbgу bgneypbb __ \b^u b hkh[_gghklb \ jZa
2. KhpbZewghghfbq_kdb_ ihke^kl\by bgneypbb
3. Nhjfu b f_lh^u klZ[bebaZpbb ^_g_`gh]h h[jZs_gby
4. L_hjbb bgneypbb
5. OZjZdl_jbklbdZ b hkh[_gghklb bgneypbhgdhociNh_p^_kjZp\bb J

Тема 5. «Валютные отношения и валютная система»

1. Ihgylb_ b dZl_]hjbb \Zexlguo hghr_gbc b \Zexlguo kbkl_f
2. <b^u b we_f_glu \Zexlguo kbkl_f GZpbhgZevgZy \ZexlgZy fbjh\Zy \ZexlgZy kbkl_fZ b wlZiu __ w\hexpbb
3. Ihgylb_ b deZkkbnbdZpby \Zexl b \Zexlguo dmjkh\ F_lh j_]mdbh\Zgby \Zexlgh]h dmjKZ
4. F_`^mgZjh^gu_ jZkq_lu bo f_oZgbaf b nhjfu
5. ;ZeZgku f_`^mgZjh^guo jZkq_lh\ Lhj]h\uc ieZl_`guc b jZkl_eZl_`guc b jZkq_lguZ[ZueZkkl_f_ \Zexlgh]h j_]mdbh\Zgby
6. <hagbdgh_gb_ b jZa\bib_ \Zexlghc kbkl_fu JN

Тема 6. «Сущность, формы, виды и роль кредита в экономике.

Ссудный процент и его роль»

1. G_h[oh^bfhklv b kmsgghklv nmgdpbb b ijbgpbiu dj_^bIZ
2. Jhev b]jZgbpu dj_gyb_bZ]ljZgbpu ijbfg_g_gby dj_^bbZ gZ fbjhmjh\gyo
3. L_hjbb dj_^bIZ gZlmjZebklbq_kdZy dZibIZehI\hj_q_kdZ wdhghfbq_kdhc gZmd_
4. Nhjfu b \b^u dj_^bIZ
5. Ihgylb_ nmgdpbb bklhgghdb nhjfbjh\Zgby mqZklgbbd jug

6. Kmsgghklv b nmgdpbb klZ\dZ kkm^gh]h ijhp_glZ
7. Hkgh\u nhjfbjh\Zgby mjh\gy kkm^gh]h ijhp_glZ =jZgbpu
bklhqgbbd _]h mieZlu Jhev kkm^gh]h ijhp_glZ \ wdhghfbd.

Тема 7. «Банковская система и ее элементы»

1. <hagbdgh_gb_ b jZa\blb_ [Zgdh\
2. Kmsgghklv nmgdpbb [Zgdh\ agZq_gb_ b jhev [Zgdh\ \ jZa\blb
3. <b^u [Zgdh\ b bo h[t_^bg_gbc
4. lhgylb_ dj_^blghc kbkl_fu]hkm^Zjkl\Z Kh\j_f_ggZy kljmd
wdhghfbq_kdb jZa\bluo]hkm^Zjkl\
5. ;Zgdh\kdZy kbkl_fZ dZd khkl\ZhgZybaZkflw kljj_Z^gu
6. lhgylb_ we_f_glh\ [Zgdh\kdhc kbkl_fu ;Zgdh\kdZy
khklZ\eyxsb_
7. ;Zgdh\kdZy kbkl_fZ Jhkkbckdhc N_^_jZpbb __ a_gvy
8. ljZ\h\u_ hkgh\u [Zgdh\kdhc ^_yl_evghklb \ Jhkkbckdhc N
mkeh\byo

Тема 8. «Центральные банки и основы их деятельности»

1. <hagbdgh_gb_ b nhjfu hj]ZgbaZpbb p_gljZevguo [Zgdh\
2. Nmgdpbb b hi_jZpbb p_gljZevguo [Zgdh\
3. lZkkb\gu_ hi_jZpbb p_gljZevguo [Zgdh\
4. :dlb\gu_ hi_jZpbb p_gljZevgh]h [ZgdZ
5. Hi_jZpbb ;ZgdZ Jhkkbb bo oZjZdl_jbklbdZ
6. lhgylb_ ^_gdj`ghlghc iheblbdb __ p_eb b f_lh^u

Тема 9. «Коммерческие банки и их деятельность»

1. lhgylb_ dhff_jq_kdh]h [ZgdZ
2. Nmgdpbb dhff_jq_kdh]h [ZgdZ bo oZjZdl_jbklbdZ
3. ljbgbpiu ^_yl_evghklb dhff_jq_kdh]h [ZgdZ
4. Kha^Zgb_ b nmgdpbhgbjh\Zgdh]hdhZgdZ J_hj]ZgbaZpby b
dhff_jq_kdh]h [ZgdZ
5. Hj]ZgbaZpbhggZy kljmdl mjZ dhff_jq_kdh]h [ZgdZ
6. MijZ\e_gq_kdZy kljmdl mjZ dhff_jq_kdh]h [ZgdZ

Занятия семинарского типа, самостоятельная работа

ljZdlbq_kdb_ aZgyly

Тема 2. «Денежный оборот и его структура»

1. <uimkd ^_g_] \ ohayckl_gguc h[hjhl
2. Kmsgghklv b f_oZgbaf [Zgdh\kdh]h ^_ihablgh]h fmevlbie
3. lhgylb_ ^_g_`gh]h h[hjhlZ b \b^u ^_g_`gh]h h[jZs_gby
4. GZeb`gh`guc h[hjhl b ^_g_`gh_ h[jZs_gb_
5. Hkgh\gu_ ijbgbpiu hj]ZgbaZpbb`gZpbb`gh]h
6. MqZklgbbd gZebqguo jZkq_lh\
7. ;_agZebqguc ^_g_`guc h[hjhl _]h oZjZdl_jbklbdZ
8. Kbkl_fZ [_agZebqguo jZkq_lh\ __ hkgh\gu_ we_f_glu Nhj
9. JZkq_lu ieZl_`gufb ihjmq_gbyfb bo oZjZdl_jbklbdZ
10. JZkq_lu ih Zddj_`cbZpZdl`pooklbdZ
11. JZkq_lu q_dZfb bo oZjZdl_jbklbdZ
12. JZkq_lu ih bgdZkhh bo oZjZdl_jbklbdZ

10. ljh_^bl_ kjZ\gbl_evgmx oZjZdl_jbklb dm ieZI_`gh]h [ZeZg
11. l_j_qbkebl_ \b^u b hkh[_ggkklb Zkq^m]Zjh^guo j
12. >Zcl_ hij_^_e_gb_ \Zexlghc kbkl_f_ Jhkkbckdhc N_^_jZpb
13. DZdh\ u ij_^ihkuedb nhjfbjh\Zgby \Zexlghc kbkl_fu Jhkkbc
14. GZah\bl_ we_f_glu \Zexlghc kbkl_fu Jhkkbckdhc N_^_jZpb
oZjZdl_jbklb dm
15. HoZjZdl_jbamcl_ kZkkl_gmxJhkkbckdhc N_^_jZpbb gZ kh\j_f
16. l_j_qbkebl_ f_lh^u j_]mebjh\Zgby ieZI_`gh]h [ZeZgkZ Jhk

Тема 9. «Коммерческие банки и их деятельность»

1. lhgylb_ dhff_jq_kdh]h [ZgdZ
2. Nmgdpbb dhff_jq_kdh]h [ZgdZ bo oZjZdl_jbklbdZ
3. ljbgbiu ^_yl_evghklb dhff_jq_kdh]h [ZgdZ
4. Kha^Zgb_ b nmgdpbhgbjh\Zgb_ dhff_jq_kdh]h [ZgdZ J_f
dhff_jq_kdh]h [ZgdZ
5. HjjZgbaZpbhggZy kljmdlmjZ dhff_jq_kdh]h [ZgdZ
6. MijZ\ e_gq_kdZy kljmdlmjZ dhff_jq_kdh]h [ZgdZ

Перечень тем рефератов

1. Dhf_jq_kdb_ [Zgdb Jhkkbckdhc N_^_jZpbb \ kh\j_f_gguo m
2. J_imlZpby b bfb^` [ZgdZ

6. Критерии оценивания результатов освоения дисциплины

6.1. Оценочные средства и критерии оценивания для текущей аттестации

Материалы для осуществления самоконтроля

Dhgljhevgu_ \hijhku

1. G_h[oh^bfhklv kmsgghklv b we=jfZggd p und g_d^tbl]h ev
dj_^blZ
2. DeZkkbnbdZpby ^_g_] F_mZZ`egbu jdk^dbb gu_ ^_gv]b
3. >_g_`gZy fZkkZ b kdhjhklv h[jZs_gby ^_g_] AZdhg
4. Fh^_ev ^_g_`gh]h JjZggdh_kb_ gZ ^_g_`ghf jugd_ L_
5. lhgylb_ wfbkkby ^_g_]a b @\uimkd ^_g_] \ ohayckl
wfbkkbb
6. Kmsgghklv b f_oZgbaf [Zgdh\kdh]h fmevlbiebdZlhjZ
7. Kmsgghklv \b^u b nhjfu ijhy\ e_gh]h g_h\grueypbZdlhju
ihjh`^Zxsb_ bgneypbx -WdphgZebvghkdb_ ihke_^kl\by bgneypbb
8. Hkgh\gu_ gZijZ\ e_gby Zglbbgneypbhggghc iheblbdb
f_lh^u ijh_^_gby ^_g_`guo j_nhjf
9. leZI_`gZkq_lgZy kbkl_fZ JN
10. >_g_`gh_ h[jZs_gb_ kmsgghklv h ekl]m dgrh]Zghc wdhghf
11. lhgylb_ b kljmdlmjZ ^_g_`gh]h h[hjh]Z
12. leZI_`guc h[hjhl_]h bgkljmf_glue Zl_klb mbl jZ]Zq_lu
ieZI_`ghf h[hjhl_]h
13. HjjZgbaZpby ^_g_`gh]h h[jZs_gby_]h ijbgbiu F_mZZ`egbu jdk^dbb gu_ ^_gv]b
^_g_`gh]h h[jZs_gby
14. Kmsgghklv ljm dkmjZ gZebqgh]h ^_g_`gh]h h[hjh]Z
hkgh\ u hj]ZgbaZpbb
15. ;hjv[Z kih^^_edhc ^_g_]h

16. ljZ\beZ gZebqgh]h h[jZs_gby ^ey dj_^blguo hj]Z
h[jZs_gb_xjb^bq_kdbo ebp b BI
17. lhjy^hd hnhjfe_gby dZkkh\uo ^hdmf_glh\ E b^f_bg_h]klZ
18. ljh[e_fu hj]ZgbaZpbb gZebqgh]h ^_g_`gh]h h
ljh]ghabjh\Zgb_-gZebqgh]h h[hjh]Z
19. ;_agZebqgu_ h[jZs_gb_ b h[hjhl ;_agZebqgu_ jZ
k^_edb <b^u jZkq_lguo ieZl_`guo i h k^ h^ d m f e z l h \ Z b ihjy
^hdmf_gljhh]Z
20. ljbppbiu hj]ZgbaZpbb [_agZebqguo jZkq_lh\ ;_ag
nbabq_kdbfb ebpZfb Nhjfu [_agZebqguo jZkq_lh\ L_ogheh]
21. Hj]ZgbaZpby f_`[Zgdh\kdbo jZkq_lh\
22. >_g_`gZy kbkl_fZ kmsgghklv b nmgdpbb
23. Lbiu \b^u b nhjfu ^_g_`guo kbkl_f
24. KbkfZ f_lZeebq_kdh]h h[jZs_gby
25. KbkfZ [mfZ]g^h]gh]h h[jZs_gby nb^mpbZjgu_
26. OZjZdl_jgu_ q_jlu kh\j_f_gghc ^_g_`ghc kbkl_fu
27. DeZkkbnbdZpby we_f_glh\ ^_g_`ghc kbkl_fu
28. We_f_glu [Zah\h]h mijZ\e_gq_kdh]h bgnjZkljmdlmj
kbkl_fu
29. F_lh^b bgkljmf_glu j_]mebjh\Zgby ^_g_`ghc kbkl_fu
30. >_g_`gZy kbkl_fZ JN b __we_f_glu
31. >_g_`g^h^_b]gZy iheblbdZ P; JN
32. KbkfZ gZ^ahjZ b dhgljhey \ qZklb f_j ih jZkdjulb
g_cljZebaZpbb b ij_k_q_gbx ^_yl_evghklv k\yaZgg^h]cf k e
^hoh^h\ ihemq_gguo ij_klmiguf iml_f b nbgZgkbjh\Zgb_f_l_
33. ljh[e_fu h[_ki_q_gby [_ahiZkghklv ^_g_`ghc kbkl_fu
34. G_h[oh^bfhklv kmsgghklv b we_f_glu dj_^blZ =jZ
dj_^blZ Nhjfu dj_^blZ <b^u dj_^blZ
35. ;Zgdh\kdbc dj_]h b b ZjZdl_jbklbdZ
36. Dhff_jq_kdbc dj_^bl b_]h oZjZdl_jbklbdZ
37. =hkm^Zjkl_gguc dj_^bl b_]h oZjZdl_jbklbdZ
38. F_`^mgZjh^guc dj_^bl b_]h oZjZdl_jbklbdZ
39. Nbjf_ggu_ qZklgu_ f_`^mgZjh^gu_ dj_^blu
40. Kkm^guc dZiblZe kmsgghklv b bklhqqgdbb nhjfbjh\Zg
41. Jughd kkm^guc dZiblZeh\ kmsgghklv kljmdlmjZ nmgdpbb
42. Hj]ZgbaZpby b hkgh\gu_ ijbppbiu dj_^blh\Zgby Hk
dj_^blh\Zgby
43. Kkm^guc ijhp_gl ihgylb_ nmgdpbb b jhev KbkfZ
44. NZdlhju hij_^_eyxsb_ mjh_gv jughqguo ijhp_glguo
45. Hij^_e_gb_ ^hoh^ghklv ^he]h\h]h bgkljmf_g]Z
46. Hkh[_gghklv kkm^gh]h ijhp_g]Z \ Jhkkbb
47. Kh^_j`Zgb_ kljmdlmjZ b agZq_gb_ dj_^blghc kbkl_f
48. lZjZf_lju dj_^blghc kbkl_fu __ nmgdpbb jhev b agZ
49. Lbiu dj_^blguo kbkl_f We_f_glu dj_^blghc kbkl_fu
dj_^blghc kbkl_fu
50. =hkm^Zjkl_ggh_ j_]mebjh\ZggZ_g kh\ u b l g g klv l m l h\
51. ;Zgdh\kdZy kbkl_fZ ijbagZdb ijbppbiu ihkljh_gby b
52. Kmsgghklv b hkh[_gghklv iZjZ[Zgdh\kdhc kbkl_fu
53. FbdjhnbGZgkh\u_ hj]ZgbaZpbb Kkm^hk[_j_]Zl_evgu.
54. Dj_^guc dhhi_jZDj\^blgu_ khxau b h[s_kl\Z \a
dj_^blh\Zgby
55. Ehf[Zj^gZy ^_yl_evghklv

56. Nmgdpbb b jhev [Zgdh\k\h\j\m\k\l\k\j\Zfb we_f_glu [Zgd
kbkl_f\k\h\k\Z\ kh\j_f_ggh_ khklhygb_ b ijh[e_fu jZa\blby
Jhkkbb
57. Kbkl_fh\Z\jmxsb_ nZdlhju jZa\blby [Zgdh\kdhc
Wdhghfbq_kdb_ hlghr_gby \ [Zgdh\kdhc kbkl_f_
58. Hkh[_gghklb gZpbhgZevguo [Zgdh\kdbo kbkl_f
59. Kmsgghklv nmgdpbb b jhev [ZgdZ ljbgbpiu ^_
DeZkkbnbdZpby [Zgdh\
60. lhjy^hd kha^Zgby ebp_gab\j\p\Z\g\Z\gd\Z\
61. Hj]ZgbaZpbhggh_ mkljhckl\h dhff_jq_kdh]h [ZgdZ
62. Kbkl_fZ mijZ\e_gby dhff_jq_kdbf [Zgdh
63. DeZkkbnbdZpby b djZldZy oZjZdl_jbklbdZ j_kmjkh\
64. lhgylb_ b kljmdlmjZ kh[kl_ggh]h dZiblZeZ dhff_jq_k
65. Hp_gdZ ^hklZl\Z\g\h\Z\Z\ dhff_jq_kdh]h [ZgdZ
66. KljmdlmjZ b dZq_kl\h Zdlb\h\ dhff_jq_kdh]h [ZgdZ
ieZl_ _kihkh[ghklb [ZgdZ
67. >hoh^u jZkoh^u b ijb[uev dhff_jq_kdbo [Zgdh\
68. ;Zgdh\kdbc fZjd_lbg] ;Zgdh\kdb_ hi_jZpbb b mkem]
69. lZkkb\gu_ hi_jZpbb dhff_jq_kdb kljmdlmjZ b
oZjZdl_jbklbdZ
70. >_ihablu dhff_jq_kdh]h [ZgdZ
71. >_ihablgu_ b k[_j_]Zl_evgu_ k_jlbnbdZlu [Zgdh\kdb
72. F_ [Zgdh\kdbc dj_^bl
73. :dlb\gu_ hi_jZpbb dhff_jq_kdh]h [ZgdZ
74. Dj_^blgu_ hi_jZpbb p_ev aZ^Zqb \b^u
75. lhjy^hd nhjfbjh\Z\p\kyhevah\Zgby j_a_j\Z gZ \hafh`g
kkm^Zf
76. Hi_jZpbb J?IH Bihl\qgu\ppbhgg\ukj^gbq_kdb_ hi_jZ
dhff_jq_kdh]h [ZgdZ lhkj^gbq_kdb_ hi_jZpbb k p_ggufb [m
77. JZkqz\g\Z\kkh\h_ h[kem`b\Zgb_ deb_glh\ dhff_jq_kdh]
78. ;Zgdh\kdb_ hi_jZpbb k ieZklbdh\ufb dZjZfb
79. G_ljZ^bpbhggu_ hi_jZpbb dhff_jq_kdbo [Zgdh\
80. G_h[oh^bfhklv b ihgylb_ mijZ\e_gby Z\p\ba\Zfb b Zi\Zkq
mijZ\e_gby Zdlb\Zfb b iZkkb\Zfb Dhfb_l ih mijZ\e_gbx Zdlb
81. MijZ\e_gb_ Zdlb\h\j\Zpbyfb b iZkkb\gufb hi_jZpbyfb
82. :gZeba b hp_gdZ ^hoh^guo ihjln_e_c [Zgdh\ :gZeb
klZl_c ihjln_e_c [ZgdZ ih iZkkb\gufb\h\p\Z\p\h\lv nhjfbjh\
ihjln_e_c [Zgdh\ ih Zdlb\guf b iZkkb\guf hi_jZpbyf
83. ;Zgdh\kdZy ebd\k\m\sg\h\klv kljmdlmjZ l_j\p\g\p\bb b
\lhjbqgu_ j_a_j\u ebd\b^ghklb [ZgdZ
84. MijZ\e_gb_ ebd\b^ghklvx dhff_jq_kdh]h [ZgdZ H
dhff_jq_kdh]h [ZgdZ
85. Kmsgghklv b deZkkbnbdZpby [Zgdh\kdbo jbkdh\ b bo
86. MijZ\e_gb_ [Zgdh\kdZ\fb jfb_klh^u hp_gdb [Zgdh\kdb
F_lh^u kgb`_gby [Zgdh\kdbo jbkdh\
87. K[_j_]Zl_evgu [Zgd jhkkbckdhc n_^_jZpbb
88. Bg_klbpbhggu_ [Zgdb bo nmgdpbb b hkh[_gghklb h
89. Bihl_qgu_ [Zgdb b bo hi_jZpbb
90. LjZgkgZpbhgZevgu b g[Zgdh\Zy [ZaZ fg_h]Nm\p\Z\g^kZ
91. P_gljZevguc [Zgd deZkkbnbdZpby b _]h f_klh \
F_lh^u \ha^_ckl\by P; gZ wdghghbmdm

92. P_gljZevguc [Zgd Jhkkbckdhc N_^_jZpbb ,p_eb
kljmdlmjZ
93. J_a_j\gZy kbkl_fZ ;ZgdZ Jhkkbb
94. Dj_^blu ;ZgdZ Jhkkbbblgiu_jZpbb ;ZgdZ Jhkkbb
95. >_g_`gh_^blgZy iheblbdZ p_gljZevgh]h [ZgdZ p_eb
96. GZ^ahjgu_ b j_]mebjmxsb_ nmgdpbb p_gljZevgh]h [ZgdZ
97. Dhfi_l_gpby p_gljZevgh]h [ZgdZ jn \ kn_j_ hj]Zgb
jZkq_lh\
98. ;ZeZgk dZd]eZ\gZy nhjfg_lgZevgh]h [ZgdZ
99. Fbjh\Zy \ZexlgZy kbkl_fZ b \ZexlgZevgh]h [ZgdZ
100. Kmsgghklv b deZkkbnbdZpby \ZexlgZevgh]h [ZgdZ
- kh^_j`Zgb_ \b^u efbfu
101. J_]mebjh\Zgblguo hi_jZpbc dhff_jq_kdbo [Zgdh\
102. Fbjh\hc jughd ahehlZ

Задачи (пример)

Задача 1. Bf_xlky ke_^mxsb_ ^Zggu_ h kljmdlmj_ ^_g_`ghc fZkku \ fej^ j
^_g_`ghc fZkku ^ZgZ \ fej^ jm[e_c
LZ[ebpBkoh^gu_ ^Zggu_

	>_g_`gu_ Z]j_]Zlu			
	F	F	F	F
gZ	158,4	665,8	902,4	933,2
gZ	1320	5202	5623	5944

JZkkqblZcl_

- dhwnnbpb_gl bkihevah\Zgby ^_g_`guo kj_^kl\
-dhwnnbpb_gl ebd\b^ghklb

Решение:

Dhwnnbpb_gl bkihevah\Zgby ^_g_`guo kj_^kl\
gZ gZqZeh i_jbh^Z

$$\bar{e}_y - l_b j_m [e_{\setminus uo} d_{mix} \frac{f}{\sum f} = \frac{10}{75} = 0.133$$

>ey hklZevguo dmixj jZkq_l ^_eZ_lky ZgZeh]bqgh
Ih kmff_ dmixjgh_ kljh_ gby_ ihmijn_hjfe_

$$\bar{e}_y - l_b j_m [e_{\setminus uo} d_{mix} \frac{m}{\sum m} = \frac{100}{9100} = 0.011$$

>ey hklZevguo dmixj jZkq_l ^_eZ_lky ZgZeh]bqgh
3. JZkkqbIZ_f kj_^gxx dmixjghklv ih nhjfme_

$$\bar{N} = \sum \frac{\sum N_f}{\sum f} = \sum N d_f = 10*0.133 + 50*0.133 + 100*0.667 + 500*0.04 + 1000*0.026 = 120.7$$

Задача 3. GhjfZ h[yaZI_evguo j_a_j\h\Z Dhwnnbpb_gl ^_ihgbjh\Z
hij_^_ey_fuc dZd hlghr_gb_ gZebqghklb- F ^_ihabI_ZZ ^_ihabIh\ Km
h[yaZI_evguo jRa_j\h\ fej^ j_m[hbjv^h[t_f ^_g_`ghc fZkku F \ h[hjh
^_ihabIh\ b gZebqguo ^_g_]

Решение:

$$\begin{matrix} R=D*r, D=R/r & fej^ j_m[\\ F D D^A & fej^ j_m[\\ F D F & fej^ j_m[\end{matrix}$$

Задача 4. GhjfZ h[yaZI_evguo j_a_j\h\ yaZI_kemfZo hj[a_j\h\ fej^ j
kmffZ ^_ihabIh\

Решение: 3% - fej^ j - O fej^ j KmffZ ^_ihabIZ fej^ j

Задача 5. Ba[ulhqgu_ j_a_j\u [ZgdZ jZ\gu feg ^he h[sZy krefgZ ^hdms
ghjfZ h[yaZI_evguo j_a_j\h\ DZdh\ u nZdlbq_kdb_ j_a_j\u [ZgdZ"

Решение:

$$\begin{matrix} NZdlbq_kdb_ j_a_j\u [ZgdZ jZ\gu kmff_ h[yaZI_evguoRnbZdba[ulhq \\ D*r_{h[yaZI} Rba[feg ^he \end{matrix}$$

Задача 6. GhjfZ h[yaZI_evguo j_a_j\h\ jZ\gZ dhfebjpbgZ h\hifZlch
^hee ;Zgd fh`_l \u^Zlv dj^blu h[tzfhf g_ [he__ luk ^hee DZdh\ u
ijhp_glZo hl ^_ihabIh\"

Решение:

$$\begin{matrix} GZc^zf _ebqbgm h[yaZI_evguo j_a_j\h\ [ZgdZ \\ R_{h[yaZI} D*r_{h[ya} feg ^hee \\ Hij_^_ebf _ebqbgm nZdlbq_kdb_ j_a_j\h\ \\ R_{nzdf} D - R_{h[ya} 20 \pm feg ^hee \\ Lh]^Z _ebqbgZ ba[ulhqguo j_a_j\h\ [m^_l jZ\gZ feg \\ R_{h[ya} R_{nzdf} R_{ba} 17,6 - feg ^hee \\ L_i_jv jZkkqbIZ_f ba[ulhqgu_ j_a_j\u [ZgdZ R_{ba} 100 \pm 0,8 / 100 * 100 = 4\% \end{matrix}$$

Задача 7. H[t_f <<l khkIZ\ey_l ljeg j_m[Z ^ljeg`gjm[fZkku^_eblv
Z dhwnnbpb_gl fhg_lbaZpbb wdghfbdb
[khjhklv h[hjhIZ ^_g_]

Решение:

$$\begin{matrix} Z Df F <<l \\ [9 <<l F jZa \]h^ \\ Hl_l Df 9 jZa \]h^ \end{matrix}$$

Задача 8. Ba_klgh qlh \] \gmlj_ggbc gZpbhgZevguc ijh^mdl <GI \
fej^ _jh \ g_baf_ggu p_gZofej^]_jh Hij_^_ebi_ ^_neylhj <GI

Решение:

$$>_neylhj <GI \] khkIZ\bl$$

Задача 9. Z Bg^_dk ihlj_[bl_evkdbo p_g BIP \ yg\Zj_] Z \ n
 mjh_gv bgne \ n_jZe_

Решение:

Mj bgne beb
 [<] ihlj_[bl_pvgdb_Jhkkbb \ujhkeb gZ DZd baf_gbeZkv ihdmi
 jm[ey

Решение:

Mihdmi kihk jm[ey Mp_g - bebbeblhdmiZI_evgy
 kihkh[ghklv kgbabeZkv gZ

6.2. Оценочные средства и критерии оценивания для промежуточной аттестации

NhjZ ijhf_`mlhqghc ZhhkZpbb
 >ey hij_^_e_gby mjh_gy knhjfbjh\Zggghklb dhfi_l_gpbc ijb
 g_aZ\bkkbfhc hp_gdb

Экзаменационная оценка по курсу ставится на основании экзаменационного теста,
 состоящего из 2-частей и среднего балла по текущей успеваемости.

Часть 1. \dexqZ_ll_klh\hijhk\ \u[jZgguo kemqZcg fZd kjZafv gZy
 hp_gdZ aZ l_kl [Zeeh\
 Blh]h ih qZ 50 баллов.

Часть 2 \dexqZj_lr_gb_aZ^Zq \u[jZgguo kemqZcg fZd jZafv gh_
 j_lr_gb_aZ^Zq [Zeeh\
 Blh]h ih l_klZf fh`g 60 баллов

Кроме того, текущая успеваемость оценивается следующим образом:

AZ dZ`^mx e_dpbx fh`gh ihemqblv [Zee [Zeeh\ lihk_s_g
 [Zeeh\
 AZ dZ`^h_ ijZdlbq_kdh_ aZ^Zq [Zeeh\ i[Zee_s\ gith_e_g_gb_ aZ^Zgbc
 hl_l gZ k_fbgZj_ ih hp_gdZf [ZeeZ aZ @m^h\e_l\hjbl_evgy
 [Zee aZ @hlebbqgh^a

Итого 39 баллов.

>jm]b_ ihhsjbl_evgu_ [Zeeu
 MqZkNbHebfibZ^_ [Zee i_j_u_ ljb f_klZ ± j[Zeeh]_ ih[\^alm_e
 [Zeeh\
 Im[ebdZpby klZlvb [Zeeh\

*Критерии оценки уровня овладения студентами компетенциями на экзамене
 с помощью теста и среднего балла*

Оценка	Баллы	Характеристики ответа студента на экзамене
hlebbqgh	10	100-125 [Zeeh\ 90-99 [Zeeh\ 80-89 [Zeeh\ 70- [Zeeh\ 60- [Zeeh\ 50- [Zeeh\ 40- [Zeeh\ 30- [Zeeh\ 20- [Zeeh\ 0- [Zeeh\ 1
	7	
	6	
m^h\e_l\hjbl_	5	
	4	
g_m^h\e_l\hjb	3	
	2	
	1	

L_kl ijb_f_j

1. $\langle b^k \rangle_{f_g} Z_{pb} hkg \backslash Z_{gg} uc \ gZ \ -ijjthgnp_kkikZoh \ g \ Z \ e \ p \ g \ Z$
 $\wedge_e \ gby \ gZk_e \ jZky \ mh \ k \ h \ a \ e \ x \ ` \ b \ a \ g \ b \ i \ h \ e \ v \ a \ h \ m \ Z \ g \ t \ k \ y \ [\ Z \ g \ d \ h \ \ k \ d \ b \ o$
 w \ h

Z \ hajZklgZy k_]f_g]Zpby
 []_h^_fh]jZnbq_kdZy k_]f_g]Zpby
 \ ikboh^_fh]jZnbq_kdZy k_]f_g]Zpby
] deb_g]kdZy k_]f_g]Zpby
 ^ ^_fh]jZnbq_kdZy k_]f_g]Zpby

D dZdhfm \b^m fZjd_lbg]Z hlghkylky ^_ckl\by [Zgdh\kd

h[s_gb_ l_e_fZjd_lbg]
 Z Zd]b\guc fZjd_lbg]
 [iZkkb\guc fZjd_lbg]
 \ fZjd_lbg] hjb_g]lbg]Zdeb_g]Z

D dZdhfm \b^m j_deZfu hlghkblky j_deZfZ bkihevam_

[Zgdh\kdh]h ijh^md]Z gZ jugd_ gZijZ\e_g]Zyg]Z \ ihl_gpbZev

Z gZihfbgZxsZy
 [bgnhj]Z]b\gZy
 \ ih^dj_ieyxsZy
] _sZ]_evgZy
 ^ ij__glb\gZy

4 $\langle b^h \rangle_{fZjd_lbg]Z} \ ijb_f_gyxsbfky \ ijb \ g_]Z]b\ghf \ hlghr_$
 mkem]Zf \eyx]ky
 Z j_f]Zjd_lbg]
 [fZjd_lbg]k
 \ ^_f]Zjd_lbg]
] dhg_jkbhgguc fZjd_lbg]
 ^ klbfmebjmxsbc fZjd_lbg]

D dZdhfm lbim hlghkblky hj]ZgbaZpb]h]g]Zy k]h]m[d]l]m]jZ

mkeh\byo aZ\h_\Zgby jugdZ mkem] ijb _\^_gbb gh\uo hi_jZ

Z Z^Z]l]b\gZy
 [ijh_d]lgZy
 \ ebg_cgZy
] nm]gd]pbhgZevgZy

Задачи (пример)

Задача 1. $Bf_xlky \ ke_^mxsb_^Zggu_h \ kljmd]mj_ \ ^_g_`ghc \ fZkku \ f$
 $Kljm]d]jZ \ ^_g_`ghc \ fZkku \ ^ZgZ \ fej^ \ jm[e_c$
 $LZ[ebp \ Bkoh^gu_^Zggu_$

	$> _g_`gu_Z]j_]Z]u$			
	F	F	F	F
gZ	158,4	665,8	902,4	933.2
gZ	1320	5202	5623	5944

JZkkqblZcl_
 -dhwnnbp]b_g] bkihevah\Zgby ^_g_`guo kj_^kl\
 -dhwnnbp]b_g] ebd\b^ghklb

Решение:

Dhwnnbp]b_g] bkihevah\Zgby ^_g_`guo kj_^kl\ gZ gZqZeh i_jbh^
 Db^gi F gi F gi
 Dhwnnbp]b_g] bkihevah\Zgby ^_g_`guo kj_^kl\ gZ dhg_p i_jbh^Z
 Db^di F di F di

Dhwnnbpb_gl ebd\b^ghklb gZ gZqZeh i_jbh^Z
 Degi F gigi
 Dhwnnbpb_gl ebd\b^ghklb gZ dhg_p i_jbh^Z
 Dedi F di F di
 <u\h^

Dhwnnbpb_gl bkihevah\Zgby ^_g_`guo kj_^kl\ ihdZau\Z_l qlh dh
 dhg_p]h^Z m_ebqbehkv ih hlghr_gbx d ^k g b b Z k g Z l Z o d g m Z s b o [Zgd
 Dhwnnbpb_gl ebd\b^ghklb ihdZau\Z_l qlh hlghr_gb_ gZebqguo
 \dexqZy ^_gv]b \ dhff_jq_kdbo p_gguo [mfZ]Zo gZ nhg^h\uo [bj`Z
 gZ

Задача 2. Hij_^_ebl_ dmixjgh_ kljh_gbkua^ihg_d'hghcql\m dmixj b ih b
 JZkkqblZcl_ kj_^gxx dmixjghklv aZ dZ`^uc]h^ gZ hkgh_ ihemq_g
 LZ[e-Mkeh\gu_ ^Zggg_u h kljh_gbb ^_g_`ghc fZkku

IhdZaZl_e	>hklhbgkl\h dmixj_jm[Blh]h
	10	50	100	500	1000	
KmffZ \ feg jm[100	500	5 000	1 500	2 000	9 100
Dhebq_kl\ wda_fieyj feg	10	10	50	3	2	75
M^_evguc ih dmixjZf	13,3	13,3	66,7	4,0	2,6	100,0
M^_evguc ih kmff_	1.1	5,5	55,0	16,4	22,0	100,0

Решение:

Hij_^_ebf dmixjgh_ kljh_gb_ ih_ dh e h g f n k e \m dmixj
 ^ey -lb jm[e_\uo $d_{mixj} = \frac{10}{75} = 0.133$

>ey hklZevguo dmixj jZkq_l ^_eZ_lky ZgZeh]bqgh
 Ih kmff_ dmixjgh_ kljh_gb_ hij_^_ey_lky ih nhjfme_

^ey -lb jm[e_\uo $d_{mixj} = \frac{100}{9100} = 0.011$

>ey hklZevguo dmixj jZkq_l ^_eZ_lky ZgZeh]bqgh
 4. JZkkqblZ_f kj_^gxx dmixjghklv ih nhjfme_

$$\bar{N} = \frac{\sum Nf}{\sum f} = \frac{\sum Nd_f}{\sum f} = 10 \cdot 0.133 + 50 \cdot 0.133 + 100 \cdot 0.667 + 500 \cdot 0.04 + 1000 \cdot 0.026 = 120.7$$

7. Перечень основной и дополнительной учебной литературы Hkg Z y ebl_jZlmjZ

1. B\Zgh\ < < >_gv]b dj_^bl [Zgdb mq_[gbd
 ZdZ^_fbq_kdh]h [ZdZeZ\jbZlZ < < B\Zgh\ ; B Khdheh
 B Khdheh\Z Ba^Zl_evkl\h XjZcl k^2 K_jby ;ZdZeZ
 :dZ^_fbq_k dh k^2 dISBN 978-5-534-01182-1. ^ J_`bf ^hkl www.biblio-online.ru/book/4111F2B2-714A-465B-BA06-F5CF0E930E00.

2. DZabfZ]hf_^h\ : : >_gv]b dj_^bl [Zgdb Z]hf]gbd
 ^ 2- ba^ i_j_jZ[^ hi B G NFJ: ^ k >hi fZl_jbZ

>We_dljhgguc j_kmjk J_`<http://www.khamiuz.com>]. ² <ukr__
h[jZah\Zgb_ ;ZdZeZ\jbZI

>hihegbl_ evgZy ebl_jZImjZ
3. >\hj_pdZy : ? >_gv]b dj_^bl [Zgdb mq_[gbd
[ZdZeZ\jbZIZ : ? ²>\hj_pdZy i_j_jZ[² B^hiBa^ZI_evkl\
XjZcl ² k² K_jby ;ZdZeZ\j :dZ^_fbqISBND98-534jk
05109-4. ² J_`bf ^hklmvZ.biblio-online.ru/book/9295C6DF-5CC9-4D66-B4B7-
[AE525F016957](http://www.biblio-online.ru/book/9295C6DF-5CC9-4D66-B4B7-AE525F016957)

4. Khdheh\ ; B >_gv]b Dj_^bl ;Zgdb Mq_[gbd ^ey [
hl_IZo ; B Khdheh\ << FB\ZgBP BGNJ:
2016.<http://znanium.com/bookread2.php?book=538106>

Ki_pbZevgZy ^hihegbl_ evgZy ebl_jZImjZ
l_jbh^bq_kdb_ ba^Zgby ©>_gv]b b dj_^bl^a ©Nb
g^ evgbdZo ©WdhghfbdZ©NbgZgkh\Zy]Za_IZ^a ©Nbg
©Dhff_jkZglt^a ©<hijhku wdhghfbd^a b ^j

7.3 Перечень ресурсов информационно-телекоммуникационной сети «Интернет»

1. N_^_jZevguc h[jZah\ZI_eURL: <http://ecs.znan.hse.ru/>.
2. ;ZaZZggu? \jhklZ± URL: <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>.
3. lhbkdh\u_ kb<http://www.google.ru/> ZZZ \DQGH[UX b ^j

8. Материально-техническое обеспечение

Zm^ mq_[gh]h dhjimkZ < Kfhe=M
KIZg^ZjlgZy mq_[gZy f[_ev mq_[guo ihkZ^hqguo f_kl
ij_ih^Z\Zl±iay rl
DZn_^jZ ^ey e_dlhjZ
>hkdZ gZkl_ggZy lj_ewel_f_glgZy
GZihevguc fh[bevguc ijh_dpbhgTUE wdjZg '\$
Fmevlbf_^bZijh_dlhj r%HQ4
Ghml[md /HQRYR
Dhehgdb *HQrLXV

Zm^ mq_[gh]h dhjimkZ < Kfhe=M
KIZg^ZjlgZy mq_[gZy f[_ev mq_[guo ihkZ^hqguo f_kl
ij_ih^Z\Zl±iay rl
DZn_^jZe^ayh±Z rl
>hkdZ gZkl_ggZy lj_ewel_f_glgZy

Zm^ mq_[gh]h dhjimkZ < Kfhe=M
Dhfivxl_jgu_ klheu rl
KIZg^ZjlgZy mq_[gZy f[_ev mq_[guo ihkZ^hqguo f_kl
ij_ih^Z\Zl±iay rl
l_jkhgZevgu_ dhfivxl_ju KasperskyEndpointSecurity ^ey [bag_kZ
KIZg^Zjlguc :H ©EZ[hjZihjby DZki_jBd-h-12-15-16353-16231.y

Microsoft Open License, e b p _ g 4 4 6 3 4 4 8 \ k h k l z \ _

1. Microsoft Windows Professional 7 Russian;
2. Microsoft Office 2010 Russian.

9. Программное обеспечение

Microsoft Open License (Windows XP, 7, 8, 10, Server, Office 2003-2016), E b p _ g a b y
66920993 h 24.05.2016

Microsoft Open License (Windows XP, 7, 8, 10, Server, Office 2003-2016), E b p _ g a b y
66975477 h 03.06.2016

Dr. Web Server/Desktop Security Suite (: g l b \ b j m E k b p _ g a b y - Q N 5 S - 6 F G 2 - N 7 6 B
(? ` _] h ^ g h [_ g h \ e _] g b _
. D V S H U V N \ (Q G S R L Q W 6 H F X U L V K \ Z g ^ z y \ g u [f a g _ E k b p _ g a b y
) % _ ` _] h ^ g h _ h [g h \ e _ g b _

