МИНИСТЕРСТВО НАУКИ И ВЫСШЕГО ОБРАЗОВАНИЯ РОССИЙСКОЙ ФЕДЕРАЦИИ
федеральное государственное автономное образовательное учреждение
высшего образования
«САНКТ-ПЕТЕРБУРГСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ
АЭРОКОСМИЧЕСКОГО ПРИБОРОСТРОЕНИЯ»

Кафедра №21

«УТВЕРЖДАЮ»
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«_07_» ____06___ 2020 г

РАБОЧАЯ ПРОГРАММА ДИСЦИПЛИНЫ

«Автоматизированные системы управления воздушным движением»
(Название дисциплины)

Код направления	25.05.03
Наименование направления/ специальности	Техническая эксплуатация транспортного радиооборудования
Наименование направленности	Техническая эксплуатация радиоэлектронного оборудования воздушных судов и аэропортов
Форма обучения	заочная

Санкт-Петербург 2020г.

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Лист согласования рабочей программы дисциплины

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:gghlZpby

>bkpbiebgZ ©:\lhfZlbabjh\Zugg mijZ\e_gby \ha^mrguf» ^\b
\oh^bl \ [Zah\mx qZklv h[jZah\Zl_evghc ijh]jZffu ih^]hl
ki_pbZevghklb ©L_ogbq_kdZy wdkiemZlZpby ljZgkihjlgh]
gZijZ\e_gg©L_ogbq_kdZy wdkiemZlZpby jZ^bhwZ_dy \ha^mr
km^h\ b Zwjhihjlh\ª >bkpbiebgZ j_Zebam_lky dZn_^jhc ‹
>bkpbiebgZ gZp_e_gZ gZ nhjfbjh\Zgb_ m \uimkdgbdZ

h[s_ijhn_kkbhgZevguo dhfi_l_gpbc
HID- ©kihkh[ghklv \ dZq_kl_ jmdh\h^bl_ey ih^jZa^_
jZ[hlgbdh\ ijbgbf_dby j_\ kblmZpbyo jbkdZ mqblu\Zy p_gm hrl
hdZau\Zlv ihfhsv jZ[hlgbdZf \ jZ[hl_ gZ^ f_`^bkpbiebgZj
ijh_dlZfbª.
Kh^_j`Zgb_ ^bkpbiebgu ho\Zlu\Z_l djm] \hijhkh\ k\y
nmdpbhgbjh\Zgby jZajZ^jhldby \gZ h[+_dlu Zpbhggu_ ij_^ijb
jZaebqgu^hfkl\ b l_ogbq_kdbf h[kem`b\Zgb_f jZ^bhl_ogbq_k
mijZ\e_gby \ha^mrguf ^\b`_gb_f fh^_ebjmxsbo dhfie
Z\lhfZlbabjh\Zgguo kbkl_f h[_ki_q_gby mijZ\e_gby \ha^mrgu
\ Z\bZij_^ijbylbyo
Ij_ih^Z\Zgb_ ^bkpbiebgu ij_^mkfZljb\Z_l ke_^mxsb_ nhjf
ijhp_kkZ e_dpbb ijZdlbq_kdb_ aZgylby kZfhklhyl_evgZy j
Ijh]jZffhc ^bkpbiebgu ij_^mkfhlj_gub^ke_^mxsb_ l_d
dhgljhev mki_\Z_fhklb ijhf_`mlhqgZy Zll_klZpby \ nhjf_ wda
H[sZy ljm^h_fdhklv hk\h_gby ^bkpbiebgu khklZ\ey_l. aZq_lg
Yaud h[mq_gby ih ^bkpbiebg_ «jmkkdbc

1. I_j_q_gv ieZgbjm_fuo j_amevlZlh\kh[mq_gby ih

1.1. P_eij_ih^Z\Zgby ^bkpbiebgu

Ihemq_gb_ klm^_glZfb g_h[oh^bfuo agZgbc b ihemq_g
h[eZklb ijh_dlbjh\Zgby \g_^j_gby b l_ogbq_kdh]h h[kem
kj_^kl\Zb lhfZlbabjh\Zgbku_f h[_ki_q_gby \ha^mrgh]h f^
dhfie_dkh\ b kZ\gh^Zlbabjh\Zgguo kbkl_f h[_ki_q_gby mijZ
^\b`_gb_f bkihevaZ\bZij_^ijbylbyo

1.2. I_j_q_gv ieZgbjm_fuo j_amevlZlh\ h[mq_gby ih ^bkpbiel

ieZgbjm_fufb j_amevlZlZfb[jZkh\Zgby h ijh]jZffu
< j_amevlZl_ hk\h_gby ^bkpbiebgu klm^_gl ^he`_g h[eZ^Zlv
HID- ©kihkh[ghklv \ dZq_kl_ jmdh\h^bl_ey ih^jZa^_e_gby
ijbgbfZlv j_r_gby \ kblmZpbyo jbkdZ mqblu\Zmqp_gbm h rhdZa
ihfhsv khljm^gbdZf \ jZ[hl_ gZ^ f_`^bkpbiebgZjgufb bggh\Zp
agZ-vijbgpbiu ihkljh_gby b nmgdpbhgbjh\Zgby jZ^bhl_ogbq
h[_ki_q_gby mijZ\e_gby hj]ZgbaZpbb \ha^mrgh]h ^\b`_gby
mf_-vZgZebaZlv\kljmdlmjgu_ ijbgpbibZevgu_ ko_fu jZ^bhl_
dhfie_dkh\ ^ey h[_ki_q_gby mijZ\e_gby \ha^mrguf ^\b`_gb_f
\eZ^_lv gZ\-dZbkl_fgh]h ZgZebaZ ijh_dlbjh\Zgby hkgh\guo
mijZ\e_gby \ha^mrguf ^\b`_gb_f bo j_]mebjh\db b wdkiemZlZ
bf_lv hiul ^_yl_-vgZklbaZpbb wdkiemZlZpbb ih bamq_gbx kl
kbkl_fghc hj]ZgbaZpbb kbkl_f kj_^kl\ h[_ki_q_gby gZ\b]Zpb

2. F_klh ^bkpbiebgu \ kljmdlmj_ HI

>bkpbiebgZ [Zabjm_lky gZ agZgbyuguoZgklm^_ijhZfb ijb b
ke_^mxsbo ^bkpbiebg
:gl_gu b mkljhckl\Z k_jo\ukhdhc qZklhlu
JZ^bhl_ogbq_kdb_ p_ib b kb]gZeu
We_dljhgbdZ
AgZgby ihemq_ggu_ ijb bamq_gbb fZl_jbZ,eZbf_^xZgghcd
kZfhkylh_evgh_ agZq_gb_ lZd b bkihevamxlky ijb bamq_gbb ^
Kbkl_fu k\yab b l_e_dhffmgbdZpbc;
JZ^bhZ\b]Zpbhgbku_fu b dhf;ie_dku
L_ogbq_kdZy wdkiemZlZpby jZ^bhwe_dljhggh]h h[hjm^h\

3. H[t_f ^bkpbiebgu \ A? Zq dZ^_f

>Zggu_ h[h[s_f h[t_f_ ^bkpbiebgu ljm^h_fdhklb hl^_evguo
^bkpbiebg_ b jZkij_^_e_gb_ wlhc ljm^h_fdhklb ih_ku_f_kl
LZ[ebpZ H[t_f b ljm^h_fdhklv ^bkpbiebgu

<b^ mq_[ghc jZ[hlu	<k_]h	Ljm^h_fdhklv k_f_kljZf
		<
1	2	3
H[sZy ljm^h_fdhklv ^bkpbiebgu? Zq	5/ 180	5/ 180

:m^blhjgu_ aZgylbc_jh q < lhf qbke_	16	16
e_dpbb, qZk	4	4
ljZdlbq_kdb_ k_fbgZjkc lA, qkZ	4	4
eZ[hjZlhjgu_ jZ[hlu qZk EJ	8	8
dmjkh\hc ijh_dl jZ[hlZ qkZ		
WdaZf_qgZk	9	9
KZfhklhyl_evgZy jZ[hlZ	155	155
<b^ ijhf_`mlhqgh]h dhg aZq_^lbnn aZwqd_aZf_g , AZq_l >bnn ,aWqda	Wda	Wda

4. Kh^_j`Zgb_ ^bkpbiebgu

4.1. JZkij_^_e_gb_ ljm^h_fdhklb ^bkpbiebgu ih jZa^_eZf b \b^Zf aZgylbc

JZa^_elu_fbu ^bkpbiebgu b bo ljm^h_fdhklv ijb_^_gu \ lZ[ebp_

LZ[ebp_ZJZa^_elu_fbu ^bkpbiebgu b bo ljm^h_fdhklv

JZa^_eu l_fu ^bkpbi	E_dpb qZk	lA K qZk	EJ qZk	DI qZk	KJK qZk
K_f_klj					
JZa^_e	2	2	4		100
JZa^_e	2	2	4		55
Blh]h \ k_f_klj_	4	4	8		155
Blh]h	4	4	8	0	155

4.2. Kh^_j`Zgb_ jZa^_eh\ b l_f e_dpbhgguo aZgylb

Kh^_j`Zgb_ l_f e_dpbhgguo aZgylbc ijb_^_gh \ lZ[ebp_

LZ[ebpZKh^_j`Zgb_ l_f e_dpbhgguo aZgylbc

1. MIJ:<E?GB? ><B@?GB?F <HA>I KM>H<
2. BKIHEVAH<:GB? F?L?HJ:>BHEHD:PBB < :K M<>

4.3. IjZdlbq_kdb_ k_fbgZjkdb_ aZgylby
L_fu ijZdlbq_kdbo aZgylbc b bo ljm^h_fdhklv ijb_^_gu \ lZ[

LZ[ebpZ 4-Zdlbq_kdb_ aZgylby b bo ljm^h_fdhklv

‹ i i	L_fu ijZdlbq_kdbo aZgylbc	Nhjfu ijZdlbq_kdbo aZgylbc	Ljm^h_fdhklv qZk	‹ jZa^_e ^bkpbi ebgu
K_f_klj 8				
1	<lhjbqgZy jZ^bh H[jZ[hldZ khh[s_gbc [hjlh\h]h hl_lqbdZ	Bamq_gb_ ghjfZlb j_gbh\h^ys_c ^hdmf_glZpbb J_r_gb_ kblmZpbhgguo aZ^Zq	2	1
2	KbgojhgbyZ \ kbkl_f_ MK> \b] _ljZ	J_r_gb_ kblmZpbhg	2	2
		<k_]	4	

4.4. EZ[hjZlhjgu_ aZgylby
L_fu eZ[hjZlhjguo aZgylbc b bo ljm^h_fdhklv ijb_^_gu \ lZ[e
LZ[ebpZ EZ[hjZlhjgu_ aZgylby b bo ljm^h_fdhklv

‹ i i	GZbf_gh\Zgb_ eZ[hjZlhjguo jZ	Ljm^h_fdhklv qZk	‹ jZa^_eZ ^bkpbiebg
K_f_klj 1			
1	Bkihevah\Zgb_ [Zau ^Zgguo ^ey ljZ_dlhjbb ihe_lZ gZ ihkZ^d_	2	1
2	Baf_j_gb_ ^Zevghklb \ jZ^bhehdZ nZah\uf f_lh^hf	2	1
3	Rbnjh\Zgb_ b ^_rbnjh\Zgb_ bgnh ihke_h\Zl_evghklb	2	1
4	JZkq_l bgl_gkb\ghklb ^h`^y ih ih ^Zgguf hl f_l_hjZ^ZjZ gZ ljZkk_ jZkijhkljZg_gby jZ^bhkb]gZeZ	2	2
	<k_:]	8	

4.5. Dmjkh\h_ ijh_dlbjh\Zgb_ jZ[hlZ

Mq_[guf ieZghf g_ ij_^mkfhlj_gh

4.6. KZfhklhyl_evgZy jZ[hlZ klm^_glh\
<b^u kZfhklhyl_evghc jZ[hlu b __ ljm^h_fdhklv ijb_^_gu \

LZ[ebpZ <b^u kZfhklhyl_evghc jZ[hlu b __ ljm^h_fdhklv

<b^kZfhklhyl_evghc jZ[hl	<k_]h q	K_f_klj q
1	2	3

KZfhklhyl_evgZy jZk[h]lhZ	155	155
bamq_gb_ l_hj_lbq_kdh]h fZlujb LH	110	110
dmjkh\h_ ijh_dlbjh\Zgb_ DI D		
jZkq_-lgZnbq_kdb_ aZ^Zgby J		
\uiheg_gb_ j_n_jZlZ J		
Ih^]hlh\dZ d l_dms_fmLDhgljhe	20	20
^hfZrg__ aZ^Zgb_ >A		
dhgljhevgu_ jZ[hlu aZhqgbdh	25	25

5. I_j_q_gv m-f_[gh^bq_k]h h[_ki_q_gby ^ey kZfhklhy jZ[hlu h[mqZxsboky ih ^bkpbiebg_ fh^mex

Mq_[-fhlh^bq_kdb_ fZl_jkZfhklhyl_evghc jZ[hlu h[mqZxsbo i i 10-.

6. I_j_q_gv hkgh\ghc b ^hihegbl_evghc ebl_jZ

6.1. Hkgh\gZy ebl_jZlmjZ

I_j_qgv hkgh\ghc_jZlmju ijb_l^Z_eb7p LZ[eb7p-Z I_j_q_gv hkgh\ghc ebl_jZlmju

Rbnj	;b[ebh]jZnbq_kdZy URL Z^j_k	Dhebq_kl\h wda_fieyjh\ djhf_ we_dljhgguo wda_f
351.814	: J ;_klm]bg F h\bq : < <heh^y]bg F D =bfbryg < I B\Zgh\ < < DmibgÜ : I Ieykh\kdbo : > Nbebg : X RZljZdh\ J J :xih\ H : Dbk_e_\ H < /IZhgdh\Z X = RZljZdh\a^Zgb_ : \lhfZlbabjh\Zggu_ kbkl_fu mijZ\e_gby \ha^mrguf ^\b`gb_f mq_[gh_ ihkh[b_ ^ey kh^_glh\ <MA ih gZijZ\e_gbx 162107.65/ – F Fbgbkl_jkl\h h[jZah\Zgby b g-Kldb JN Ihebl_bdgZ 2013. – k	24
351.814	: J ;_klm]bg B : < : KZggbdh\ : > Nbebg X = RZljZdh\ Ih^ j_^ : J ;_klm]bgZ ;_ahiZkghklv ihelh\ b gZijZ\e_gby jZa\blby lj_gZ`_jh\ ki_pbZebklh\ mijZ\gby Z\bZpb_c Fhgh]jZnb-y KI; =M: 2015. – k	10
22.95	H[hkgh\Zgb_ \u[hjZ ijZdlbdb KI[Km^h	15

	k	

6.2. >hihegbl_evgZy ebl_jZlmjZ

I_j_qgv^hihegbl_evghc ebilj_bj\Z_l^mjuZ\[ebp 8

LZ[ebp-Z 8-I_j_q_gv^hihegbl_evghc ebl_jZlmju

Rbnj	;b[ebh]jZnbq_kdZyRIk Z^j_k	Dhebq_kl\h wda_fieyjh\ djhf_ we_dljhgguyjh\ wda_f
656.005.52	< < Dmag_ph\ K < : < KZfhceh\ : : FZevq_\kdbc X = RZljZdh\ Kbkl_fguc ZgZeba \ nmg^Zf_guZoevgb ijbdeZ^guo bkke_^h\Zgbyo ih^ j_^ < < Dmag_ph\Z Kbl_oghe Z .– k	15
629.7.05.022	RZljZdh\ X = I_jki_ l_ogheh]bb ijb[hjhkl_gh by F Wdhghfbd Z k	
621.396.96	Fh^_ebjh\Zgb_ \ jZ^bhe j_^ : B E_-hgh\Z.h\ jZ^bh k	

7. I_j_q_gv j_kmjkh\ bgnh-jlf_Zep_bhgfhmgbdZpbhgghc BGL?JG?L g_h[oh^bfuo ^ey hk\h_gby ^bkpbi

I_j_q_gv j_kmjkh\ bgnhjfZlpe_bhgfhmgbdZpbhgghc k_lb BGL?JG? ^ey hk\h_gby ^bkpbie^bgu\ ebp 9.

LZ[ebp-Z I_j_q_gv j_kmjkh\ bgnhjfZpbhgfhmgbdZpbhgghc k_lb g_h[oh^bfuo ^ey hk\h_gby ^bkpbiebgu

85/ ^Zj_k	GZbf_gh\Zgb_
Fb2-pdf.com/ua/category/book56117.html	:\lhfZlbabjh\Zggu_ kbkl_fu mijZ\e_g ^\b`_gb_f Gh\hjfZpbhggu_ l_ogheh]bb Z\Zpbb

8. I_j_q_gv bgnhjfZpbhgguo l_ogheh]bc bkiheva hkms_kl\e_gbb h[jZah\Zl_evgh]h ijhp_kkZ ih ^

8.1. I_j_q_gv ijh]jZffgh]h_gby ki_q

I_j_qgv bkihevam_fh]h ijh]jZffgh]h h[_ki_q_gby Zbe_10. ^klZ\e_g \

LZ[ebp-Z I_j_q_gv ijh]jZffgh]h h[_ki_q_gby

‹ i i	GZbf_gh\Zgb_
	G_ ij_^mkfhlj_gh

8.2. I_j_q_gv bgnhjfZ-pbhgguo kbkl_f

I_j_q_gv bkihevam_fuo bgnhjfZpbhgguo kbkl_f ij_^klZ\e_g \ lZ[

LZ[ebp-Z I_j_q_gv bgnhjfZpbhgguo kbkl_f

‹ i i	GZbf_gh\Zgb_
	G_ ij_^mkfhlj_gh

9. FZl_jbZe-lgbgbq_kdZy [ZaZ g_h[oh^bfZy ^ey hl h[jZah\Zl_evgh]h ijhp_kkZ ih ^bkpbiebg_

KhklZ\ fZl_jbZe-lgbq_kdhc [Zau ij_^klZ\e_g \ lZ[ebp_

LZ[ebpZ KhklZ\ fZl_jbZe-lgbq_kdhc [Zau

‹ i i	GZbf_gh\Zgb_ khklZ\ghc qZklbgfZl_jbZe-lgbq_kdhc [Zau	Ghf_j Zm^bl g_h[oh^bfhklb
1	E_dpbhggZy Zm^blhjby	
2	Fmevlbf_^bcgZy e_dpbhggZy Zm^blhjby	14-07

10. Nhg^ hp_ghqguo kj_^kl\ ^ey ijh_^_gby ijhf_`mlh h[mqZxsyoh ^bkpbiebg_

10.1. KhklZ\ nhg^Z hp_ghqguo kj_^kl\ ijb_^_g \ lZ[ebp_

LZ[ebpZ KhklZ\ nhg^Z hp_ghqguo kj_^kl\ ^ey ijhf_`mlhqghc

<b^ ijhf_`mlhqghc Zll_	Ijbf_jguc i_j_q_gv hp_ghqg
WdaZf_g	;be_lu khklZ\e_gu ba \hijhgh \ lZ[ebp_

10.2. I_j_q_gv dhfi_l_gpbc hlghkysboky d ^bkpbiebg_ b w ijhp_kk_ hk\h_gby h[jZah\Zl_evghc ijh]jZffu ijb_^_gu \ lZ[e LZ[ebpZ I_j_q_gv dhfi_l_gpbc k mdZaZgb_f wlZih\ bo nh hk\h_gby h[jZah\Zl_evghc ijh]jZffu

Ghf_j k_f_kljZ	WlZiu nhjfbjh\Zgby dhfi_l_gpbc ^bkpbiebgZf ijZdlbdZ \ ijhp_kk_ hk\h_gby H
HID ©kihkh[ghklv \ dZq_kl_ jmdh\h^bl_^_ey jZh^jZai_e_gh ijbgbfZlv j_r_gby \ kblmZpbyo jbkdZ mqblu\Zy p_gm hrb[db ihfhsv jZ[hlgbdZf \ jZ[hl_ gZ^ f_`^bkpbiebgZjgufb bggh\Zpb	
4	Ikboheh]by b i_^Z]h]bdZ
6	Ijhba\h^kl_ggZy ijZdlbdZ
7	Hkgh\u f_^`gf_glZ
7	BgnhjfZpbhggu_ l_ogheh]bb mijZ\e_gb
8	:\lhfZlbabjh\Zggu_ kbkl_fu mijZ\e_ ^\b`_gb_f
8	Ijhba\h^kl_ggZy ijZdlbdZ
10	Ijhba\h^kl_ggZy ijZdlbdZ
11	;_ahiZkghklv ihe_lh\
12	Ijhba\h^kl_ggZy ij_^^biehfgZy ijZdlb

10.3. < dZq_kl_jbjb_hp_gdb mjh\gy knhjfbjh\Zgghklb hk\h_g dhfi_l_gpbc ijbf_gy_lky rdZje_clbg^mevgh-kbkl_fu mgb_jkbl_lZ

ij_^klZ\e_gZ –[Zeevgzy bZy rdZeu ^ey hp_gdb knh
dhfi_l_gpbc
LZ[ebp-Djbl_jbb hp_gdb mjh\gy knhjfbjh\Zgguo dhfi_l_gpbc

Hp_gdZ dhfi_l_g		
100-[Zevgzy rdZeZ	4-[Zevgzy rdZeZ	OZjZdl_jbklbdZ knhjfbjh\Zgguo dhfi_l_gpbc
85 d Dd100	©hlebqgh ©aZql_gh	- h[mqZxsbcky]em[hdh b \k_klhjhgZf_gu fZl_jbZe - m_j_ggh eh]bqgh ihke_^h\Zl_evgh b]jZf - hibjZykv gZ agZgby hkgh\ghc b ^hihegbl - kgh ijb\yau\Z_l mk\h_ggu_ gZmqgu_ iheh` ^_yl_evghklvx gZijZ\e_gby - mf_eh h[hkgh\u\Z_l bjmZj]mf_\u^\b]Z_fu_ bf b^ - ^_eZ_l \u\h^u b h[h[s_gby - k\h[h^gh \eZ^__l kbkl_fhc ki_pbZebabjh\
70 d Dd84	©ohjhrh ©aZql_gh	- h[mqZxsbcky l_j^h mk\hbe ijh]jZffguc f ih kms_kl\m]Zbaez]h hibjZykv gZ agZgb ebl_jZlmju - g_ ^himkdZ_l kms_kl_gguo g_lhqghkl_c - m\yau\Z_l mk\h_ggu_ agZgby k ijZdlbq_ gZijZ\e_gby - Zj]mf_glbjm_l gZmqgu_ iheh`_gby - ^_eZ_l \u\h^u b h[h[s_gby - \eZ^__l kbkl_fhc ki_pbZebabjh\
55 d Dd69	©m^h\e_l\h ©aZql_gh	- h[mqZxsbcky mk\hbe lhevdh hkgh\ghc i ih kms_kl\m baeZ]Z_l _]h hibjZykv gZ ag ebl_jZlmju - h^himkdZ_l g_kms_kl_ggu_ hrb[db b g_lhqg - bkiulu\Z_l aZljm^g_gby \ ijZdlbq_kdhf ijb gZijZ\e_gby - keZ[h Zj]mf_glbjm_l gZmqgu_ iheh`_gby - aZljm^gy_lky \ nhjfmebjh\Zgbb \u\h^h\ b h[- qZklbqgh \eZ^__l kbkl_fhc ki_pbZebabjh
Dd54	©g_m^h\e_l\h ©g_ aZql_gh	- h[mqZxsbcky g_ mk\hbe agZqbl_evghc fZl_jbZeZ - h^himkdZ_l kms_kl_ggu_ hrb[db b g jZkkfhlj_gbb ijh[e_f \ dhgdj_lghf gZijZ\e_gb - bkiulu\Z_l ljm^ghklb \ ijZdlbq_kdhf ijbf_g_ - g_ fh`_l Zj]mf_glbjh\Zlv gZmqgu_ iheh`_gb - g_ nhjfmebjm_l \u\h^h\ b h[h[s_gbc

10.4. Lbih\u_ dhgljhevgu_ aZ^Zgby beb bgu_ fZl_jbZeu
1. <hijhku aZ^Zqb ^ey wdaZf_gZ
LZ[ebp-<hijhku ^ey wdaZf_gZ

‹ i i	l_j_q_gv \hijhkh\ _gZ wdaZf
1	BgnhjfZpbhggh_ h[_ki_q_gb_ ihe_lh\ \ \ha^mrghf i
2	A_fgu_ gZ\b]Zpbhggu_ kbkl_fu dhhj^bgZl
3	Kbkl_fu ihkZ^db
4	Ijbgpbiu Z\lhfZlbaZpbb ijhp_kkh\ M<>

5	Nmgdpbb i_jki_dlb\guo Z\lhfZlbabjh\Zgguo kbkl_f
6	:jobl_dlmjZ bgnhjfZpbb i_j\bqguo b \lhjbqguo jZ^bhe
7	ljh]jZffgu_ kj_^klZ<>
8	FZkrlZ[j_Zevgh]h \j_f_gb
9	H[jZ[hldZ bgnhjfZpbb i_j\bqguo b \lhjbqguo jZ^bhe
10	<lhjbqgZy jZ^bhehdZpby
11	Kbkl_fu Z\lhfZlbq_kdh]h aZ\bkbfh]h gZ[ex^_gby
12	Lbih\Zy Zwjh^jZhfhgy kbkl_fZ M<>
13	Nmgdpby ij_^mij_`^_gby klhedgh_gbc \ :K M<>
14	Kihkh[u b kj_^kl\Z i_j_^Zqb ^Zgguo
15	Pbnjh\u_ dZgZeu i_j_^Zqb ^Zgguo
16	Dhfie_dk kj_^kl\ Z\lhfZlbaZpbb ieZgbjh\Zgby \ha^m
17	:\lhfZlbabjh\Zggh_ jZ[hq__ f_klh ^bki_lq_jZ
18	<lhjbqgZy JEK
19	KZfhe_lguc hl_lqbd
20	AZ^Zqb f_l_hjZ^bhehdZpbb \ ahgZo Zwjhihjlh\
21	<ebygb_ _ljZ gZ ihe_lu \ha^mrguo km^h\
22	Hkgh\u jZ^bhehdZpbb f_l_hh[t_dlh\
23	Mjh\gb jZ^bhehdZpbhgghc hljZ`Z_fhklb ^h`^_c k\y hkZ^dh\
24	H[gZjm`_gb_ lmj[me_glguo h[eZkl_c
25	H[gZjm`_gb_ ahg k^\b]h\ _ljZ

2. <hijhku aZ^Zqb ^ey aZq_lZ ^bnn_j_gpbjh\Zggh]h aZq_l

LZ[ebpZ <hijhku aZ^Zqb ^ey aZq_lZ ^bnn AZq_lZ

‹ i i	l_j_q_gv \hijhkh\ aZ^Zq ^ey aZq_lZ ^bnn aZq_lZ
	Mq_[guf ieZghf g_ ij_^mkfhlj_gh

3. L_fu b aZ^Zgb_ ^ey \uiheg_gby dmjkh\hc jZ[hlu \uihe
lZ[ebpZ
LZ[ebpZ 3Z– ljbf_jguc i_j_q_gv l_f ^ey \uiheg_gby dmjkh\hc jZ[hlu
dmjkh\h]h ijh_dlZ

‹ i i	ljbf_jguc i_j_q_gv l_f ^ey \uiheg_gby dmjkh\hc jZ[hlu \uih dmjkh\h]h ijh_dlZ
	Mq_[guf ieZghf g_ ij_^mkfhlj_gh

4. <hijhku ^ey ijh_^_gby ijhf_`mdbq_gihjb Z_k_kZ\Zgbb lZ[ebpZ
LZ[ebpZ 19Z– ljbf_jguc i_j_q_gv ihijhku ^ey l_klh\

‹ i i	ljbf_jguc i_j_q_gv ihijhku ^ey l_klh\
	G_ ij_^mkfhlj_gh

5. Dhgljhevgu_ b ijZdlbq_kdb_ aZ^Zqb aZ^Zgby ih ^bkpbieb
LZ[ebpZ 20Z– ljbf_jguc i_j_q_gv dhgljhevguo b ijZdlbq_kdbo aZ^Zq aZ

‹ i i	ljbf_jguc i_j_q_gv dhgljhevguo b ijZdlbq_kdbo aZ^Z
	JZkq_l ^Zevghklb ^_ckl\by jZ^bhehdZlhjh\ ih aZ^Z

10.5. F_lh^bq_kdb_ fZl_jbZeu hij_^_eyxsb_ ijhp_^mju hp_g
gZ\udh\ b beb hiulZ ^_yl_evghklb oZjZdlj_hZgbxsb_ dhfwlZiu
kh^_j`Zlky \ lheh`_gbyo ©H l_dms_f dhgljhe_ mki_\Z_fhklb
klm^_glh\ =M:I h[mqZxsboky ih ijh]jZffu \ukr_]h h[jZah\Z
j_clbg]h\hc kbkl_f_ hp_gdb dZq_kl\Z mq_[ghc jZ[hlu klm^_gl

11. F_lh^bq_kdb_ mdZaZgby ^ey h[mqZxsboky ih hk\

P_evx ^bkpbiebgu– yheymdkygb_ klm^_glZfb g_h[oh^bfuo a
gZ\udh\ \ h[eiZhklbdlbjh\Zgby ih^]hlh\db d ijhba\h^kl\m
h[kemZghbx b wdkiemZlZpbb h[hjmZ^hZgbyZgZuo kbkl_f mi
\ha^mrguf ^\b`_gb_f bkihevam_fuo \ ZwjhihjlZo p_gljZo
^\b`_gb_f b Z lZd`_ ij_^hklZ\e_gb_ \hafh`ghklb bkl
ijh^_fhgkljbjh\Zlv gZ\udb\ \kh[egZukdbh[eZklyo we_dljhgbdb b
\dexqZbykk_fu mijZ\e_gby

F_lh^bq_kdb_ mdZaZgby ^ey h[mqZxsboky dijhbhggh]h fZl_

KljmdlmjZ ij_^hklZ\e_gby e_dpbhggh]h fZl_jbZeZ
baeh`_gb_ fZl_jbZeZ k bkihevah\Zgb_f ^hkdb
baeh`_gb_ fZl_jbZeZ k bkihevah\Zgb_f ijh_dlhjZ ^_fhgklj

-- ihykg_gb_ dhgkljmdpbb we_dljhgguo ijb[hjh\ b [ehdh\ k bk

F_lh^bq_kdb_ mdZaZgby ^ey h[mqZxs_bcky ijZdlbq_kdbo aZgylbc

IjZdlbq_kdh_ aZgylby ijh\h^ylky dZd \ bgl_jZdlb\ghc nhjf hj]ZgbaZpb ijhp_kkh\ aZdexqZxsZyky \ \uihe_gby ihe_gby jmdh\h^kl\hf ij_ih^Z dhfie_dkZ mq_[guo aZ^Zgbc k p_evlx_hjmlbq_kdbo gZkqh\h- ^bkpbiebgu ijbh[j_l_gby mf_gbc b gZ\udh\ hiulZ l\hjq_kdhc

P_evijZdlbq_kdh]h aZgylby ijh\h^ylky ijbh[mqZxs_fky mf_gbc b gZ\udh\ ijZdlbq_kdhc ^_yl_evghklb ih bamqZ_fhc ^

IeZgbjm_fu_ j_amevlZlu ijb hk\h_gbb h[mqZxs_fky ijZdl

aZdj_ie_gb_ m]em[e_gb_ jZkrbj_gb_ b ^_lZebaZp dhgjdlguo aZ^Zq

jZa\blb_ ihagZ\Zl_evguo kihkh[ghkl_c kZfhklhyl l\hjq_kdhc Zdlb\ghklb

h\eZ^_gb_ gh\ufb f_lh^Zfb b f_lh^bdZfb bamq_gby ^bkpbiebgu

\ujZ[hldZ kihkh[ghklb eh]bq_kdh]h hkfuke_gby ihe \uiheg_gby aZ^Zgbc

h[_ki_q_gb_ jZpbhgZevgh]h khq_lZgby dhee_dlb\ghc h[mq_gby

F_lh^bdZ ijh_^_gby ijZdlbq_kdh]h aZgylby fh`_l [ulv jZ ^hklb`_gb_ h[s_c p_eb. ^bkpbiebgu

Lj_[h\Zgby d ijh_^_gbx ijZdlbq_kdbo aZgylbc

IjZdlbq_kdb_ aZgylby ijh\h^ylky dZd \ bgl_jZdlb\ghc n]jmiih\uo ^bkdmkkbc lZd b \ g_ bgl_jZdlb\ghc nhjf_ wdkiemZlZpbhgghc b jmdh\h^ys_c ^hdmf_glZpbb ijhkfhlj n j_r_gb_ kblmZpbhgguo aZ

F_lh^bq_kdb_ mdZaZgby ^ey h[mqZxs_bcky ijZlhjguo jZ[h

< oh^_ \uiheg_gby ijZlhjguo jZ[mqZxsbcky ^m]e_gb aZdj_ibl agZgby ijZdlbq_kdh\eZ^_lyi_f_gghc f_lh^bdhc b l_ogbdhc v khhl_kl\bb k d\ZebnbdZpbhgghc oZjZdlbq_kdhc <uihe eZ[hjZlhjguo jZ[hlbl ba wdki_jbf_gdZevgh- jZkZ_bdb- qZkl_c b dhgljhevguo f_jhijbylbc

<uiheg_gb_ jZ[hjeZlhjguo jZ[hlh[mqZxsbfky\ey g_hlt_fe_fhc qZ bamq_gby ^bkpbiebgu hij_^_ey_fhc mq_[hlu ieZgbjf_^kl\ h[_ki_qb\Zxsbf j_r_gb_ ke_^mxsbo mhk[mqZxs_jZ^Zq

ijbh[j_l_gb_ gZ\udh\ bkke_^h\Zgby ijhp_kkh\ y\e_gbc jZfdZo ^Zgghc ^bkpbiebgu

aZdj_ie_gb_ jZa\blb_ b ^_lZebaZpby l_hj_lbq_kdbo e_dpbyo

ihemq_gb_ gh\hc bgnhjfZpbb ih bamqZ_fhc ^bkpbiebg

ijbh[j_l_gb_ gZ\udh\ kZfhklhyl_evghc jZ[hlu k eZ[hjZl ijb[hjZfb

AZ^Zgb_ b lj_[h\Zgby d eZ[h_^Z_lbgkZ[hl
AZ^Zgb_ ^Z_lky \ \b^_ klZlbklbq_kdh]h fZl_jbZeZ k d
nhjfmeZf baeh`_gguf \ e_dpbyo
Kljmdlmjz b nhjfZ hlq_lZ h eZ[hjZlhjghc jZ[hl_
Baeh`_gu gZ kZch_ http://guap.ru/guap/standart/ob1_main.shtml).

Lj_[h\Zgby d h_nhjfe hlq_lZ h eZ[hjZlhjghc jZ[hl_
Baeh`_gu \ f_lh^bq_kdbo mdZaZgbyo d \uiheg_gbx eZ[hj

F_lh^bq_kdb_ mdZaZgby ^ey h[mqZxs_bgky ihklhyl_evgh
jZ[hlu

< oh^_ \uiheg_gbx kl_ey jZ[hlu h[mqZxsbcuiheg_y jZ[hlih
aZ^Zgbx b ijb f_lh^bq_kdhf jmdh\h^kl_ ij_ih^Z\Zl_ey gh [
mqZklby
I_j_q_gv l_f ^ey kZfhklhyl_evghc jZ[hlu
1. BgnhjfZpbhggh_ h[_ki_q_gb_ ihe_lh\ \ \ha^mrghf ijhkljZgkl
2. Ijbgpbiu Z\lhfZlbaZpbb ijhp_kkh\ M<>

3. Ijh]jZffgu_ kj_^kl\Z
4. H[jZ[hldZ bgnhjfZpbb i_j\bqguo b \lhjbqguo jZ^bhehdZpbhg
5. Kbkl_fu Z\lhfZlbq_kdh]h aZ\bkbfh]h gZ[ex^_gby
Lbih\Zy Zwj-hjZchfgh jZ^bhgZy kbkl_fZ M<>
7 Kihkh[u b kj_^kl\Z i_j_^Zqb ^Zgguo
8 Dhfie_dk kj_^kl\ Z\lhfZlbaZpbb ieZgbjh\Zgby \ha^mrgh]h ^\
9. <lhjbqgZy JEK ©Dhj_gv :Kª H[jZ[hldZ bgnhjfZpbb
10. AZ^Zqb f_l_hjZ^bhehdZpbb \ ahgZo Zwjhihjlh\ ^ey h[_ki_q
ihkZ^db
11. Hkghiu jZ^bhehdZpbb f_l_hh[t_dlh\

12. H[gZjm`_gb_ lmj[me_glguo h[eZkl_c Hp_gdZ hiZkghklb.

13. H[gZjm`_gb_ ahg k^\b]h\ _ljZ Hp_gdZ hiZkghklb.
F_lh^bq_kdbfb fZl_jbZeZfb gZijZ\eyxsbfb kZfhklh
h[mqZxsbokyky ^ey f_lh^bq_kdb_ fZl_jbZe ih ^bkpbiebg_

F_lh^bq_kdb_ mdZaZgby ^ey h[mqZxs_bgky ihh_`mlhqghc
Zll_klZpbb
Ijhf_`mlhqgZy Zll_klZpby h[mqZxsbokyky ihp_gb\Zgb
ijhf_`mlhqguo b hdhgqZl_evghu hj_aq_gby ih ^bkpbiebg_ \ H
k_[y
wdaZf_gnhjfZ hp_gdb agZgbc h[mqZxsbokyky ihp_kk_ bamq
\k_c ^bkpbiebgu kbb gZ\qZh\ kZfhklhyl_evghc jZ[hlu kihkh[
^ey j_r_gby ijZdlbq_kdbo aZ^Zq WdaZf_g dZd ijZ\be
wdaZf_gZpbhgghc k_kkbb b aZ_jrZ_lky Zll_klZpbhgghc h
©m^h\e_l\hjbl_evghª ©g_m^h\e_l\hjbl_ev
Kbkl_fZ hp_ghd ijb ijh_^_gbb ijhf_`mlhqghc Zll_klZ
khhl_lkl\bb k lj_[h\Zgby_gb© H l_dms_f dhgljhe_ mki_\Z

ijhf_`mlhqghc Zll_klZpbb klm^_glh\ =M:I h[mqZxsboky i
h[jZah\Zgbyª b ©Hj_fb'gh\mh\hgh- kbkl_f_ hp_gdb dZq_kl\Z m
klm^_glh\ \ .=M:Iª

Ebkl \g_k_gby baf_g_gbc \ jZ[hqmx ijh]jZffm ^bl

>ZlZ \g_k_gby baf_g_gbc b ^hiheg_gbc lh^ibkv \g_kr_]h baf_g_gby	Kh^_j`Zgb_ baf_g_gbc b ^hiheg_gbc	>ZlZ b ‹ijhlhdheZ aZk_^Zgby dZn_u^j	lh^ibkv aZ\ dZn_^jhc