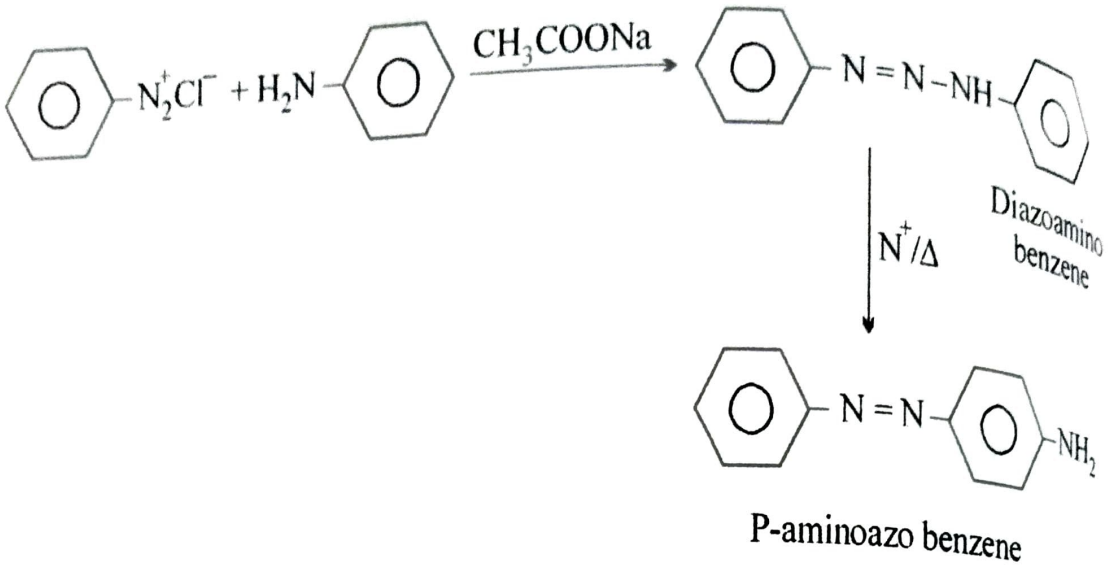
Organic comp. containg Nitrogen



MCQ's

1) Molecular formula fo urea is ..... (M/A 2011)
   a) $CO_2H_2H_4$ b) CON_2H_4
   c) CON_2H_2 d) $CONH_4$
2) Urea was first synthesized by ....
   a) Roulle b) Wholer
   c) Killiani-Fischer d) Friest-Benary
3) Ammonium cyanate on heating undergo rearrangement to give ...
   a) $NH_2–NH_2$ b) NH_3 & CO_2
   c) $NH_2-\overset{\overset{O}{\|}}{C}-NH_2$ d) NH_2-CN
4) Cyanuric acid is obtained from ...
   a) Urea b) Aniline
   c) Benzenediazonium chloride d) Phenol
5) Biuret is obtained from urea by action of ....
   a) Nitrous acid b) Hydrazine
   c) Heat d) $SOCl_2$
6) Action of thionyl chloride on urea yields ....
   a) Biuret b) Cyanamide
   c) Methyloyl urea d) Ureide
7) Methyloyl urea is obtained from urea and ....
   a) $CH_3–CHO$ b) $CH_3-\overset{\overset{O}{\|}}{C}-Cl$

c) $SOCl_2$ d) HCHO

8) N_2 & CO_2 gas were evolved from urea by action of ....
a) HNO_2 b) HNO_3
c) H_2SO_4 d) $SOCl_2$

9) Urea is treated with hydrazine to yields
a) Hydrazone b) Semicarbazone
c) Semicarbazide d) Ureide

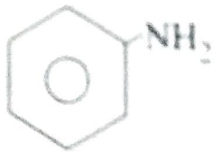
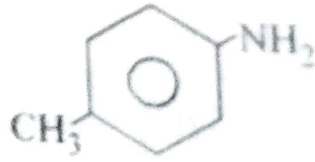
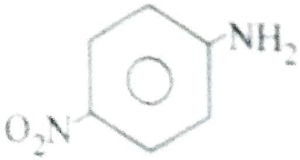
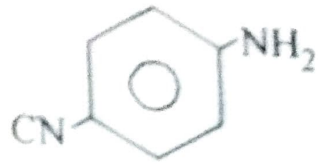
10) Urea is reacts with acetyl chloride to gives ...
a) Uracil b) Ureide
c) N-acetyl urea d) Both a & c

11) Urea is treated with nitric acid to yields ...
a) N_2 & CO_2 b) Urea nitrate
c) Cyanamide d) Ureide

12) $NH_2-\overset{\overset{O}{\|}}{C}-NH_2 \xrightarrow{SOCl_2} A,$

Where A = ?
a) $NH_3 + CO_2$ b) $N_2 + CO_2$
c) $NH_2-C\equiv N$ d) $NH_2-\overset{\overset{O}{\|}}{C}-Cl$

13) Urea on acid hydrolysis yields ...
a) $N_2 + CO_2$ b) $NH_3 + CO_2$
c) $NH_2-C\equiv N$ d) $NH_2 - COOH$

14) Which of the following is more basic compound.
a) 
b) 
c) 
d) 

15) Aniline is prepared by ...
a) Reaction of benzene with ammonia
b) Reduction of nitrobenzene with Sn/HCl
c) The dehydrogenation of nitrobenzene
d) Reaction of nitrobenzene with I_2/NaOH

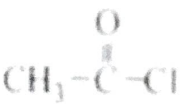
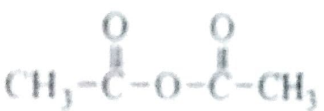
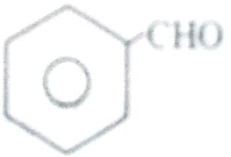
16) Which of the following statement is false about aniline.
   a) It is primary aromatic amine
   b) It is weak base which forms salt with acid
   c) It liberates nitrogen on treatment with ice-cold nitrous acid
   d) It can be prepared by reduction of nitrobenzene with tin & HCl

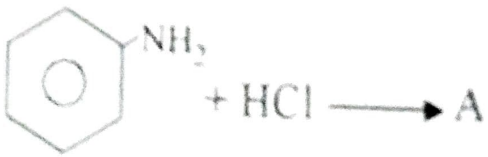
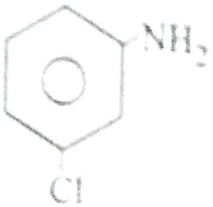
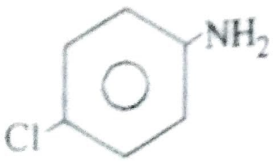
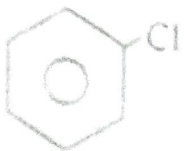
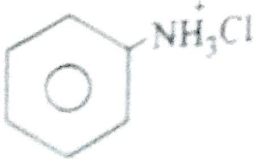
17) Aniline is heated with chloroform and alcoholic KOH, to yields
   a) Phenyl cyanide
   b) Phenyl isocyanide
   c) Benzonitrile
   d) P-chloroaniline

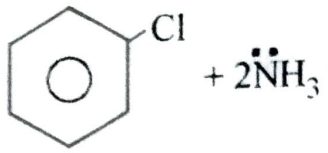
18) Aniline reacts with acetic anhydride to gives.
   a) Acetanilide
   b) P-aminoacetophenone
   c) m-aminoacetophenone
   d) N-Methyl aniline

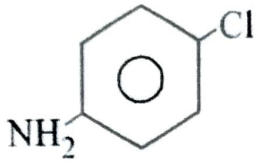
19) Which of the following does not reacts with aniline
   a) Acetyl chloride
   b) Acetic anhydride
   c) Nitrous acid
   d) Ammonia

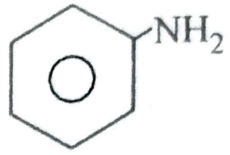
20) Aniline is treated with chloroform and alcoholic KOH to give phenyl isocyanide, the reaction is known as ...
   a) Wohler reaction
   b) Carbylamine reaction
   c) Diazotization
   d) Epimerization

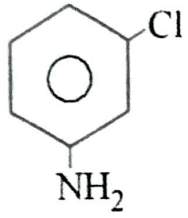
21) Schiff's base is obtained by action of aniline with ...
   a) 
   b) 
   c) Both a & b
   d) 

22)  A= ?
   a) 
   b) 
   c) 
   d) 

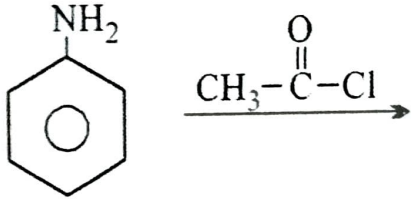
23)  ?

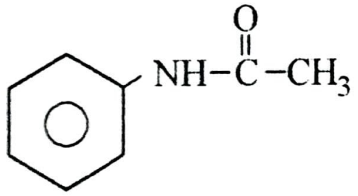
a) 

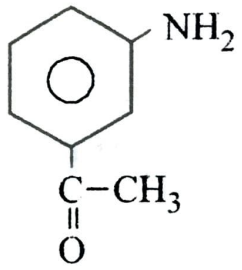
b) 

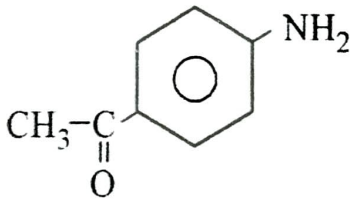
c) 

d) 

24)  A., where A = ?

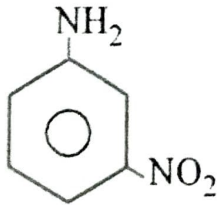
a) 

b) 

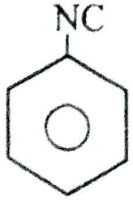
c) 

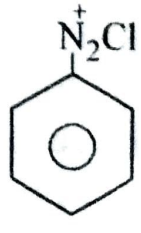
d) None of these

25) Aniline is treated with nitrous acid at low temperature yields.

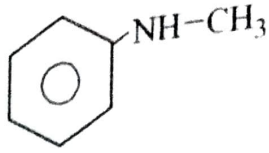
a) 

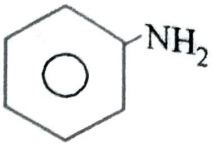
b) 

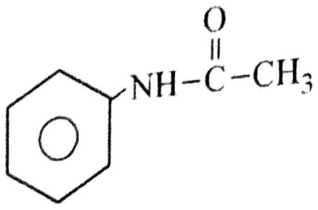
c) 

d) 

26) Which of the following compound undergo diazotization?

a) 

b) 

c) 

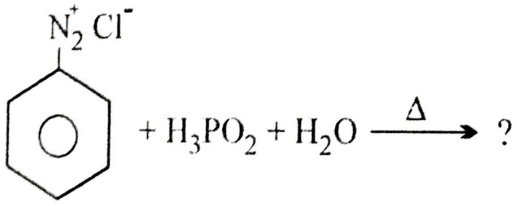
d) $CH_3-CH_2-NH_2$

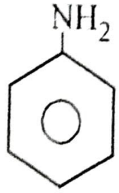
27) Process of conversion of primary aromatic amine into diazonium salt is called .... (M/A 2011)

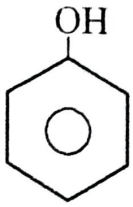
a) Diazotization
b) Nitration
c) Amination
d) Aminolysis

28) Electrophile generated during diazotization reaction is ...

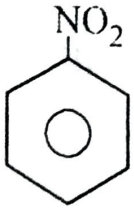
a) $NO_2^{\oplus}$
b) $NO^{\oplus}$
c) $NO_3^{\oplus}$
d) NO_2

29) 

a) 

b) 

c) 

d) 

30) Benzenediazonium chloride is treated with copper chloride yields.

a) m-dichloro benzene
b) p-dichloro benzene
c) chloro benzene
d) m-chloro benzenediazonium chloride

31) Benzenediazonium chloride is treated with cuprous chloride to give chlorobenzene. The reaction is known as

a) Sandmeyer reaction
b) Wohler synthesis

c) Diazotization reaction d) Wurtz reaction

32) Benzenediazonium chloride is heated with copper cyanide to gives...

a) Benzonitrile b) Phenyl cyanide

c) Both a & b d) Phenyl isocyanide

33) Benzenediazonium chloride heated with methanol yields ....

a) Toulene b) Aniline

c) Xylene d) Anisole

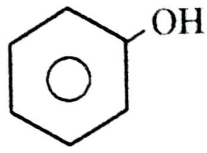
34) Benzenediazonium chloride on hydrolysis yields ...

a) Aniline b) Phenol

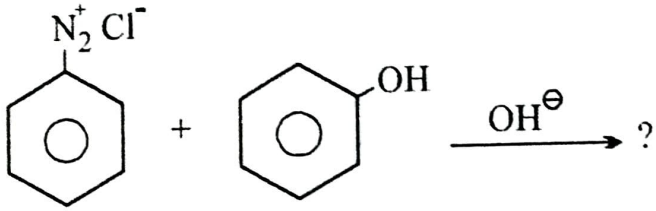
c) Nitrobenzene d) Chlorobenzene

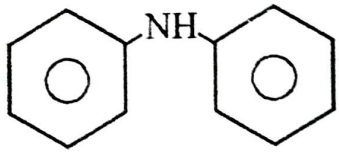
35) Retension of diazo group is observed in the reaction of Benzene diazonium salt with ...

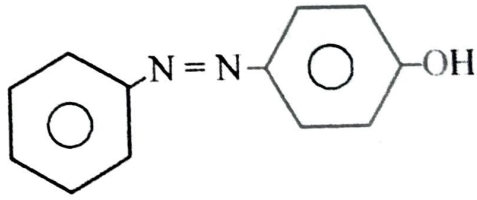
a) CH_3–OH b) CuCN

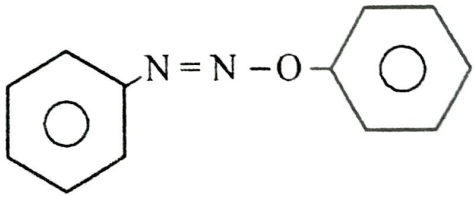
c) 

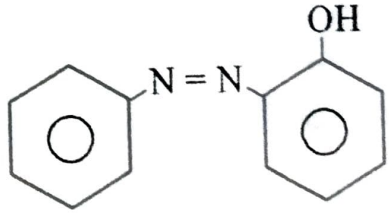
d) H_3PO_2

36) 

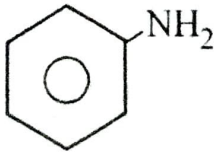
a) 

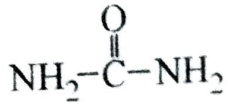
b) 

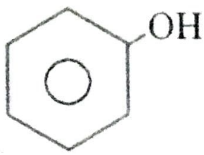
c) 

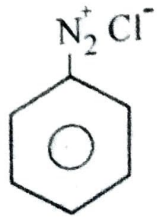
d) 

37) Which of the following compound is reactive towards nucleophilic substitution reaction,

a) 

b) 

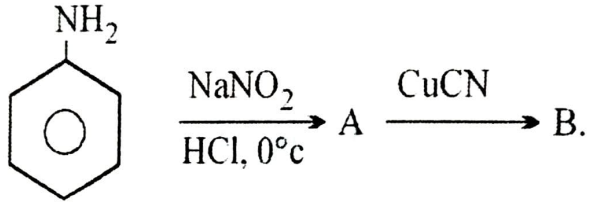
c) 

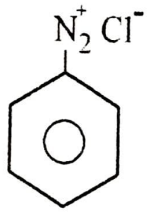
d) 

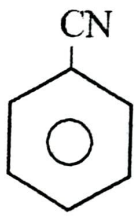
38) Chlorobenzene can be prepared by treatment of aniline with ...
a) Chlorine in presence of $FeCl_3$
c) Cuprous chloride
c) Nitrous acid followed by treatment with CuCl
d) Chlorine in presence of UV light

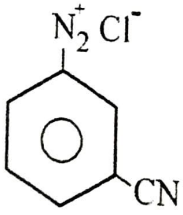
39) Benzenediazonium chloride reacts with hypophosphorus acid to form....
a) Phenol
b) Benzene
c) Aniline
d) Benzaldehyde

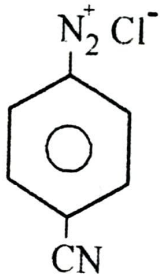
40) Identify structure B.



a) 

b) 

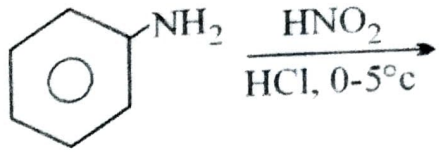
c) 

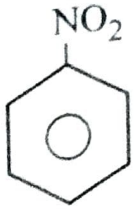
d) 

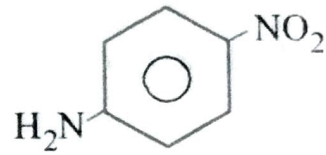
41) Benzene diazonium salt reacts with phenol to form.
a) DDT
b) p-Chlorophenol
c) Chlorobenzene
d) p-Hydroxyazobenzene

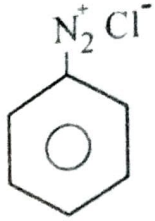
42) Aniline is prepared from ..... by .....
a) Nitrobenzene by reduciton
b) Nitrobenzene by oxidation
c) Phenyl cyanide by oxidation
d) Phenyl cyanide by reduction

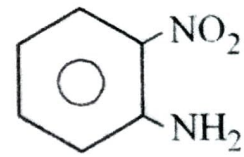
43) Preparation of benzonitrile from benzenediazonium chloride is an .... reaction.
a) Electrophilic addition
b) Electrophilic substitution
c) Nucleophilic addition
d) Nucleophilic substitution

44)  A, A is ....

a) 

b) 

c) 

d) 

45) Which of the following is not aromatic compound?
   a) Urea
   b) Aniline
   c) Benzenediazonium chloride
   d) Phenol

46) Benzenediazonium chloride warmed with water to give .... (M/A 2011)
   a) Aniline
   b) Carbolic acid
   c) Benzene
   d) Chlorobenzene

47) Aniline is prepared by treating chlrobenzene with ..... (O/N 2011)
   a) NaOH
   b) NH_3
   c) HNO_3
   d) H_2SO_4

48) Urea reacts with formaldehyde to give ..... (O/N 2011)
   a) Dimethylol urea
   b) Methanol
   c) Methanamine
   d) Ammonia and CO_2

49) Diazonium salt are the reaction product of the reaction of nitrous acid with ..... (O/N 2011)
   a) Primary aliphatic amine
   b) Primary aromatic amine
   c) Secondary aliphatic amine
   d) Secondary aromatic amine

50) CO_2 is liberated by action of urea with ....
   a) HNO_2
   b) $SOCl_2$
   c) HNO_3
   d) NH_2–NH_2

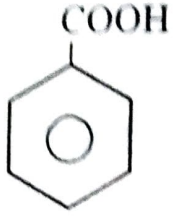
51) Urea can be prepared from CO_2 by action of ....
   a) Hydrazine
   b) Ammonia
   c) Semicarbazide
   d) Aniline

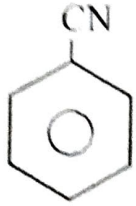
52) In the diazotization of arylamine, the use of - nitrous acid is .....

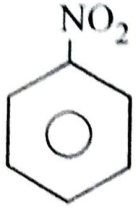
a) It suppresses hydrolysis of phenol.
b) It is a source of electrophilic nitrosonium ion
c) It neutralises the base liberated
d) All of the above

53)  $\xrightarrow[CuCN]{NaNO_2/HCl}$ A, A is ....

a) 

b) 

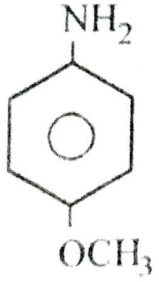
c) 

d) 

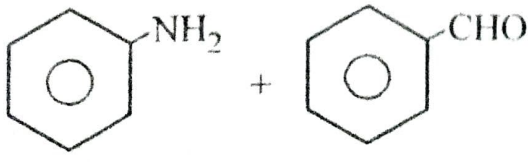
54) Which of the following arylamine undergoes diazotisation most readily?

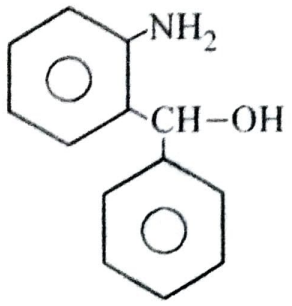
a) 

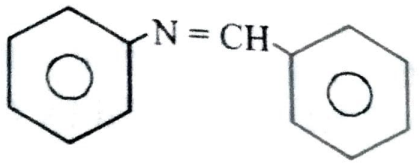
b) 

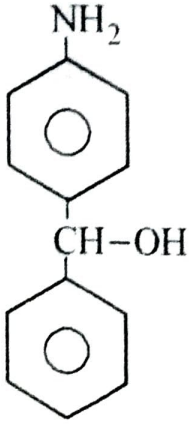
c) 

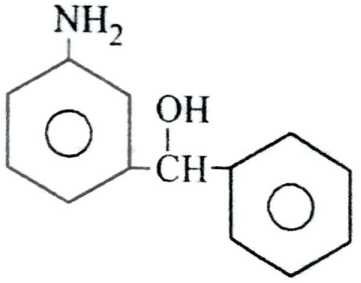
d) 

55)  $\xrightarrow{H^+}$?

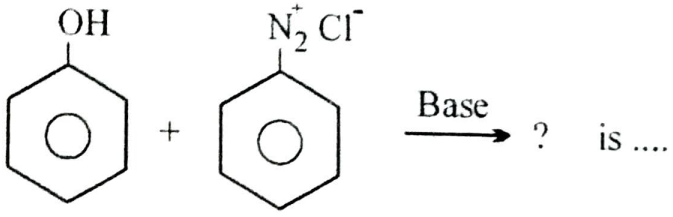
a) 

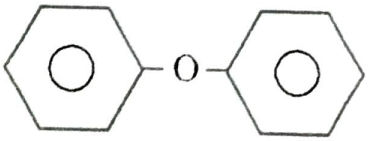
b) 

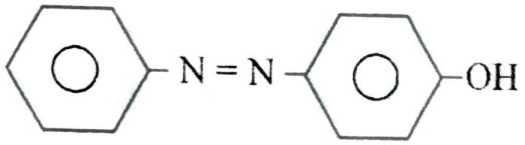
c) 

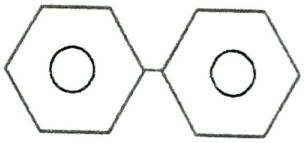
d) 

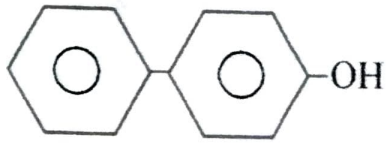
56) The product of reaction



a) 

b) 

c) 

d) 

57) Urea is diamide of ....

a) Carbonic acid
b) Carbamic acid
c) Chloroacetic acid
d) Oxalic acid

58) Which of the following compound on heating gives urea

a) Ammonium sulphate
b) Ammonium cyanate
c) Ammonium thiocynate
d) Ammonium isothiocyanate

59) Urea on strong heating at 170°C gives -

a) Biuret
b) Cyanuric acid
c) Peptide
d) NH_3 & CO_2

60) In carbyl amine reaction, the intermediate is ...

a) Carbocation
b) Carbanion
c) $:CCl_2$
d) $:CH_2$

61) The conversion of aniline to benzonitrile can be done with :

a) HNO_2 followed by CuCN
b) HNO_2 followed by CH_3CN
c) NaCN/Crown ether
d) KCN/Ethanol

62) Aniline on treatment with sodium hydroxide and chloroform produces

a) Phenyl cyanide
b) Phenyl isocyanide
c) Acetanilide
d) N, N-diamethylaniline

Answer Key

1)	**b**	2)	**b**	3)	**c**	4)	**a**	5)	**c**	6)	**b**
7)	**d**	8)	**a**	9)	**c**	10)	**d**	11)	**b**	12)	**c**
13)	**b**	14)	**b**	15)	**b**	16)	**c**	17)	**b**	18)	**a**
19)	**d**	20)	**b**	21)	**d**	22)	**d**	23)	**b**	24)	**a**
25)	**d**	26)	**b**	27)	**a**	28)	**b**	29)	**c**	30)	**c**
31)	**a**	32)	**c**	33)	**d**	34)	**b**	35)	**c**	36)	**b**
37)	**d**	38)	**c**	39)	**b**	40)	**b**	41)	**d**	42)	**a**
43)	**d**	44)	**c**	45)	**a**	46)	**b**	47)	**b**	48)	**a**
49)	**b**	50)	**a**	51)	**b**	52)	**b**	53)	**c**	54)	**c**
55)	**b**	56)	**b**	57)	**a**	58)	**b**	59)	**b**	60)	**c**
61)	**a**	62)	**b**								