

**DF-3028**

**Second Year B. Sc. (Sem. III) Examination**

**March / April – 2016**

**Industrial Chemistry (I.D.)**

Time : 2 Hours]

[Total Marks : 50

**સૂચના / Instructions :**

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<b>SECOND YEAR B. Sc. (SEM. III)</b>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<b>INDUSTRIAL CHEMISTRY (I.D.)</b>	<input type="text"/>
Subject Code No. : <input type="text"/> 3 <input type="text"/> 0 <input type="text"/> 2 <input type="text"/> 8	Section No. (1, 2,.....): <input type="text"/> 1,2
Student's Signature	

- (૨) આ પ્રશ્નપત્રમાં કુલ બે વિભાગો A અને B થઈ 35 પ્રશ્નો છે.
- (2) There are two sections in the question paper A and B having 35 questions.
- (૩) દરેક પ્રશ્નનો ફક્ત એક જ સાચો ઉત્તર છે.
- (3) There is only one correct answer for each question.
- (૪) કાળજીપૂર્વક અભ્યાસ કરી સાચો વિકલ્પ પસંદ કરીને લખો.
- (4) Select proper option to make the statement correct.
- (૫) ખોટા જવાબ માટે 0.25 પ્રતિએક માર્ક બાદ થશે.
- (5) For wrong answer 0.25 mark will be deducted per one mark.

***O.M.R. Sheet ભરવા અંગેની અગત્યની સૂચનાઓ આપેલ  
O.M.R. Sheet-ની પાછળ છાપેલ છે.  
Important instructions to fillup O.M.R. Sheet  
are given back side of provided O.M.R. Sheet.***

1 પોલિટેટ્રાફ્લોરોઇથીલીન એ ..... તરીકે પણ ઓળખાય છે.

- (A) ડેક્રોન
- (B) નાયલોન 6, 6
- (C) ટેફ્લોન
- (D) ટેરિલિન

Polytetrafluoroethylene is also known as -

- (A) Decron
- (B) Nylon 6,6
- (C) Teflon
- (D) Terylene

2 નીચેના પૈકીમાંથી કયું થર્મોસેટિંગ પ્લાસ્ટીક નથી ?

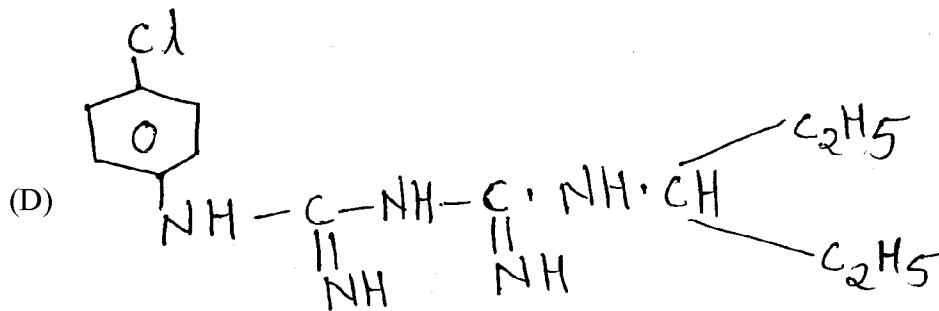
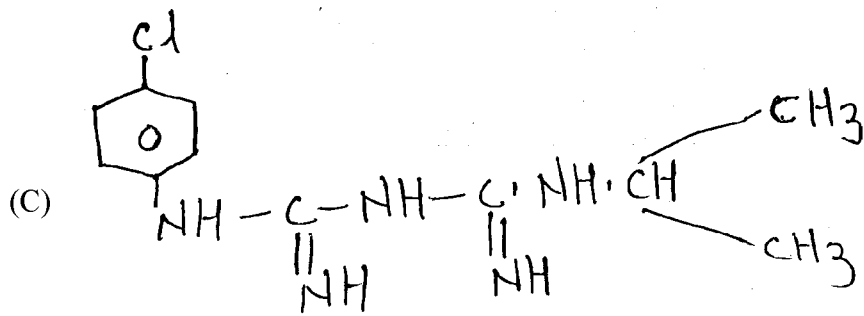
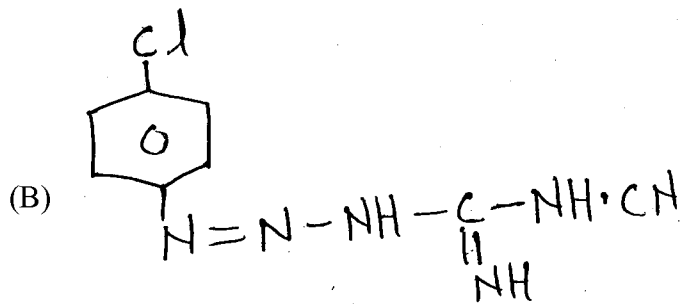
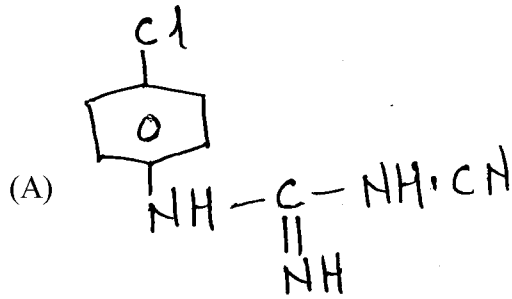
- (A) પોલિવિનાઇલ ક્લોરાઇડ
- (B) યુરિયા ફોર્માલ્ડીહાઇડ
- (C) મેલેમાઇન
- (D) બેકેલાઇટ

Which of the following is not thermosetting plastic ?

- (A) Polyvinyl chloride
- (B) Urea formaldehyde
- (C) Melamine
- (D) Bakelite

3 પેલ્યુડ્રીનનું બંધારણીય સૂત્ર ..... છે.

The structural formula of paludrine is



4 નાયલોન-6 ..... પ્રકારના રેષાઓનું ઉદાહરણ છે.

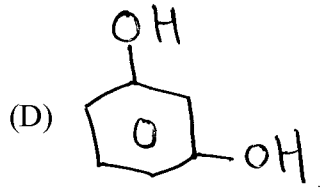
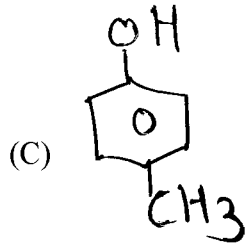
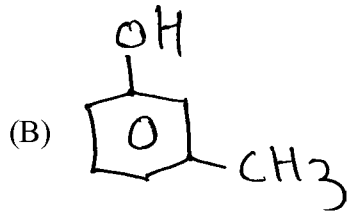
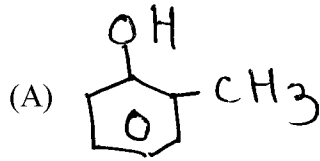
- (A) પોલિએસ્ટર્સ
- (B) કુદરતી
- (C) ફ્લોરોકાર્બન
- (D) પોલિએમાઇડ

Nylon-6 is an example of \_\_\_\_\_ type of the fibre.

- (A) Polyesters
- (B) Natural
- (C) Fluorocarbon
- (D) Polyamide

5 MCPA કયા પદાર્થમાંથી બનાવાય છે ?

From which substance MCPA is synthesized ?

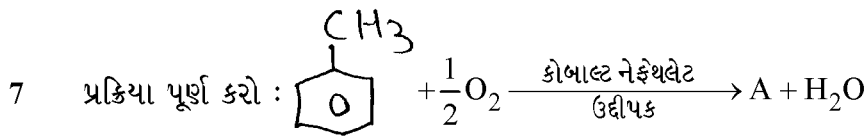


6 એમિટોલ શું છે ?

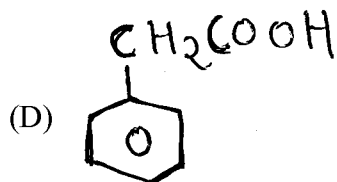
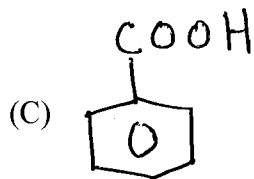
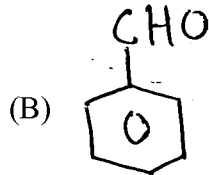
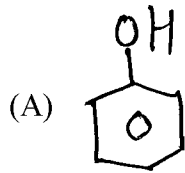
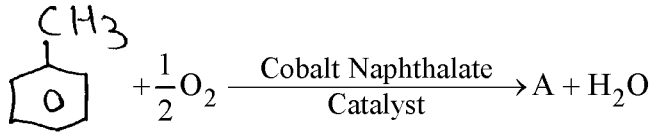
- (A) 80% TNT + 20%  $\text{NH}_4\text{NO}_3$  નું મિશ્રણ
- (B) 20% TNT + 80%  $\text{NH}_4\text{NO}_3$  નું મિશ્રણ
- (C) 80% TNP + 20%  $\text{NH}_4\text{NO}_3$  નું મિશ્રણ
- (D) 50% TNT + 50%  $\text{NH}_4\text{NO}_3$  નું મિશ્રણ

Which is Amitol ?

- (A) 80% TNT + 20% mixture of  $\text{NH}_4\text{NO}_3$
- (B) 20% TNT + 80% mixture of  $\text{NH}_4\text{NO}_3$
- (C) 80% TNP + 20% mixture of  $\text{NH}_4\text{NO}_3$
- (D) 50% TNT + 50% mixture of  $\text{NH}_4\text{NO}_3$



Complete the reaction :



8 નાયલોન 6, 10 નીચેના કયા એસિડમાંથી બનાવવામાં આવે છે ?

- (A) સેબેસિક એસિડ
- (B) ટરપ્થેલિક એસિડ
- (C) એડિપિક એસિડ
- (D) પેરા ટોલ્યુઈક એસિડ

From which of the following acid, Nylon 6,10 is prepared ?

- (A) Sebacic acid
- (B) Terphthalic acid
- (C) Adipic acid
- (D) Para toluic acid

9 ડી.ડી.ટી.નું આખું નામ જણાવો.

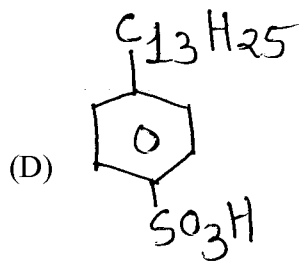
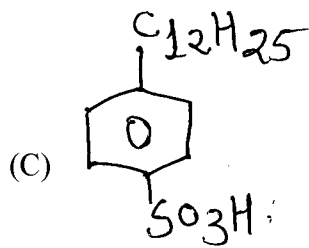
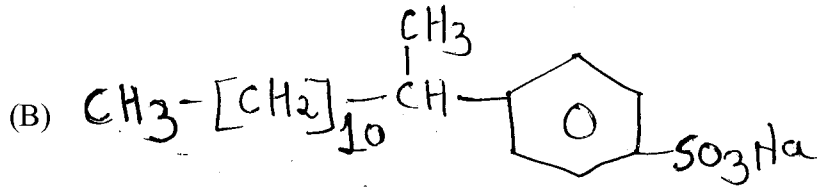
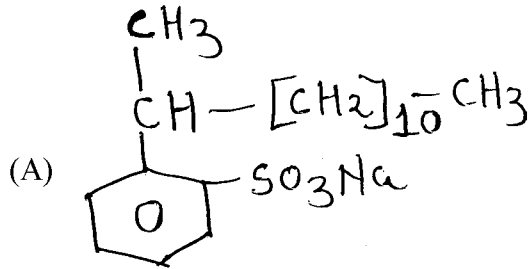
- (A) P-P' ટ્રાઇક્લોરો ટ્રાઇફિનાઇલ ટ્રાઇક્લોરો ઇથેન
- (B) P-P' ડાઇક્લોરો ડાઇમિથાઇલ ટ્રાઇક્લોરો ઇથેન
- (C) P-P' ટ્રાઇક્લોરો ડાઇઇથાઇલ ટ્રાઇક્લોરો ઇથેન
- (D) P-P' ડાઇક્લોરો ડાઇફિનાઇલ ટ્રાઇક્લોરો ઇથેન

Give full form of D.D.T.

- (A) P-P' trichloro triphenyl trichloro ethane
- (B) P-P' dichloro dimethyl trichloro ethane
- (C) P-P' trichloro diethyl trichloro ethane
- (D) P-P' dichloro diphenyl trichloro ethane

10 L.A.S. નું બંધારણીય સૂત્ર આપો :

Give structural formula of L.A.S.



- 11 ..... મેલ્યુબ્રીનનું N-મિથાઈલ વ્યુત્પન્ન છે.  
 (A) નોવોકેન  
 (B) પેલ્યુડ્રીન  
 (C) નોવાલ્જીન  
 (D) એમિનો પાયરીન  
 \_\_\_\_\_ is N-methyl derivative of Melubrin.  
 (A) Novocaine  
 (B) Paludrine  
 (C) Novalgin  
 (D) Aminopyrine
- 12 .....નું બ્યુટાડિન સાથે સહબહુલીકરણ કરી SBR નામનું સાશ્લેષિક રબર બનાવવામાં આવે છે.  
 (A) સ્ટાઈરિન  
 (B) ઈથાઈલ બેન્ઝિન  
 (C) એક્રિલોનાઈટ્રિલ  
 (D) ક્લોરોપ્રીન  
 \_\_\_\_\_ reacts with butadiene by co-polymerization to form a synthetic rubber named, SBR.  
 (A) Styrene  
 (B) Ethyl-benzene  
 (C) Acrylonitrile  
 (D) Chloroprene
- 13 પોલિવિનાઈલ ક્લોરાઈડ (PVC)નો ઉપયોગ ..... ની બનાવટમાં થાય છે.  
 (A) લેમિનેટેડ દ્રવ્યો  
 (B) સુશોભન લેમિનેટ્સ  
 (C) કાર્પેટ અને ફર્નિચર  
 (D) રેઈનકોટ અને લેક્સ  
 Polyvinyl chloride (PVC) is used in the preparation of \_\_\_\_\_  
 (A) Laminated materials  
 (B) Decorative laminates  
 (C) Carpet and furniture  
 (D) Raincoat and lacquers
- 14 ઈઓસીનનો મુખ્યત્વે ઉપયોગ શું છે ?  
 (A) સફેદ રંગક તરીકે  
 (B) લાલ રંગની શાહી બનાવવા માટે  
 (C) E.D.T.A. ના અનુમાપનમાં સૂચક તરીકે  
 (D) સુતરાઉ કાપડ રંગવા માટે  
 What is the main use of Eosin ?  
 (A) Used as white dye  
 (B) To prepare red coloured ink  
 (C) As an indicator in the titration of E.D.T.A.  
 (D) For dyeing cotton cloth

15 નાઈટ્રોગ્લિસરીન અને સેલ્યુલોઝ નાઈટ્રેટનું મિશ્રણ ..... નામથી ઓળખાય છે.

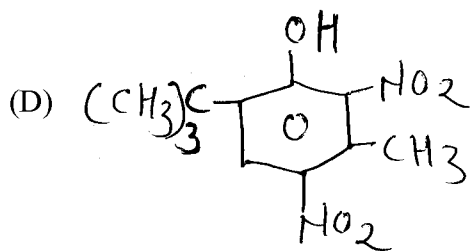
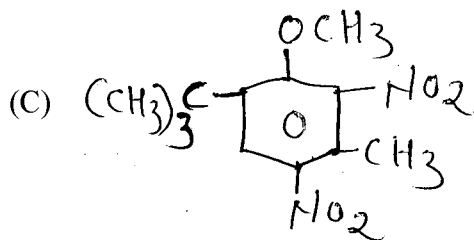
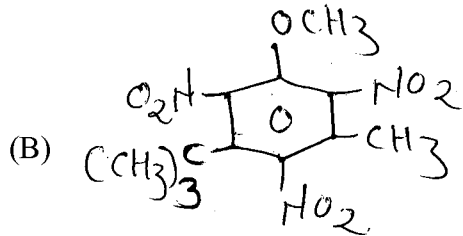
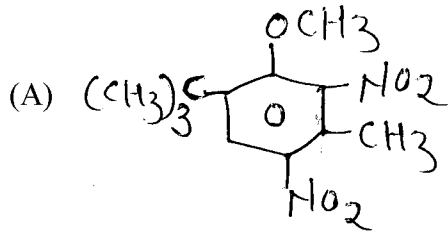
- (A) આધુનિક ડાયનેમાઈટ
- (B) કોરડાઈટ
- (C) બ્લાસ્ટિંગ ગેલેટીન
- (D) હેક્ઝોનિટ

The mixture of nitroglycerin and cellulose-nitrate is known as \_\_\_\_\_

- (A) Modern dynamite
- (B) Cordite
- (C) Blasting gelatin
- (D) Hexonit

16 મસ્ક અમ્બરિટનું બંધારણીય સૂત્ર આપો :

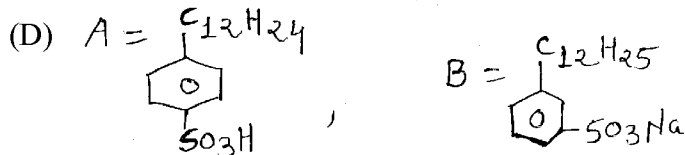
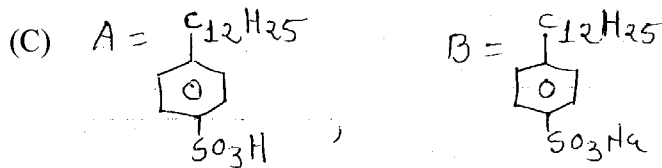
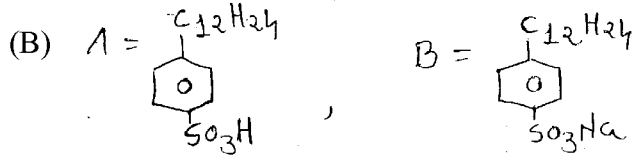
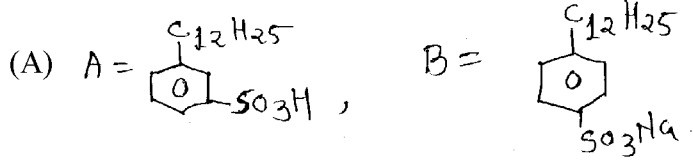
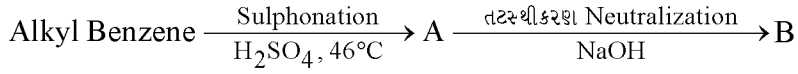
Give the structural formula of Musk Ambrette



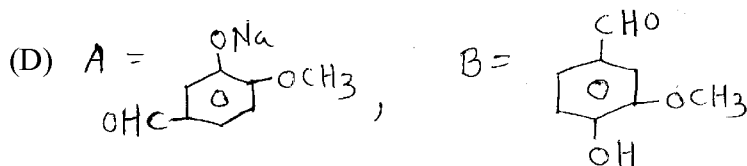
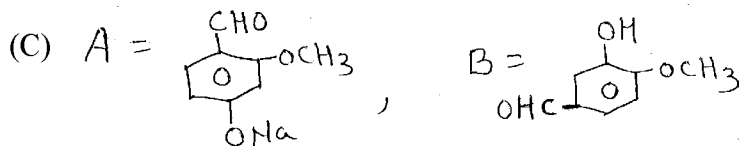
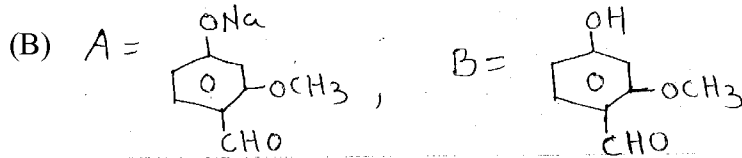
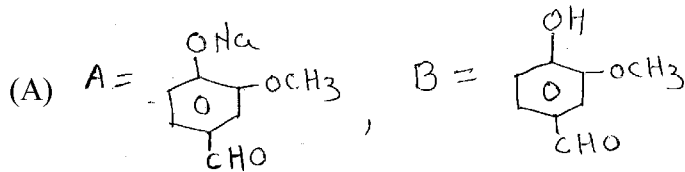
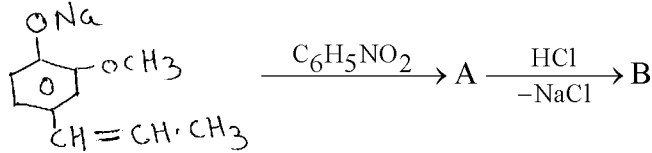


- 17 એન્થ્રાક્વિનોનનું ફ્યુમીંગ  $H_2SO_4$  વડે સલ્ફોનેશ કરતા ..... મળે છે.  
 (A) એન્થ્રાક્વિનોન-1-સલ્ફોનીક એસિડ  
 (B) એન્થ્રાક્વિનોન-4-સલ્ફોનીક એસિડ  
 (C) એન્થ્રાક્વિનોન-5-સલ્ફોનીક એસિડ  
 (D) એન્થ્રાક્વિનોન-2-સલ્ફોનીક એસિડ  
 Sulphonation of Anthraquinone with fuming  $H_2SO_4$  gives \_\_\_\_\_  
 (A) Anthraquinone-1-sulphonic acid  
 (B) Anthraquinone-4-sulphonic acid  
 (C) Anthraquinone-5-sulphonic acid  
 (D) Anthraquinone-2-sulphonic acid
- 18 ..... ઉદ્દીપકની હાજરીમાં આઈસોપ્રીનનું પોલિમેરાઈઝેશન કરીને પોલિઆઈસોપ્રીન બનાવાય છે.  
 In presence of \_\_\_\_\_ catalyst, polyisoprene is obtained by the polymerisation of isoprene  
 (A)  $CuCl_2 / NH_4Cl$   
 (B) Ziegler-Natta  
 (C)  $Fe_2O_3, Cr_2O_3, K_2O$   
 (D)  $AlCl_3$
- 19 નીચેનામાંથી કઈ પદ્ધતિ વડે એસિટિલીન મેળવી શકાય છે ?  
 (A) ક્યુમિન પદ્ધતિ  
 (B) ડાઉ પદ્ધતિ  
 (C) સાક્સે પદ્ધતિ  
 (D) રશિગ પદ્ધતિ  
 By which of the following process acetylene can be manufactured ?  
 (A) Cumene process  
 (B) Dow process  
 (C) Sachsse process  
 (D) Raschig process
- 20 ફિનોલ ..... બનાવવામાં ઉપયોગી નથી.  
 (A) સાંશ્લેષિક ઔષધો  
 (B) વિસ્ફોટકો  
 (C) સાંશ્લેષિક રંગકો  
 (D) સાંશ્લેષિક અત્તરો  
 Phenol is not used in the preparation of \_\_\_\_\_.  
 (A) Synthetic drugs  
 (B) Explosives  
 (C) Synthetic dyes  
 (D) Synthetic perfumes

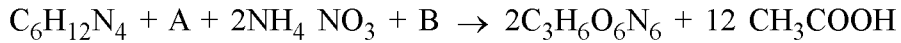
- 21 નીચેની પ્રક્રિયામાંથી મળતી નીપજો A અને B ઓળખો. આલ્કાઇલ બેન્ઝીન  
Identify the product A and B from the following reaction :



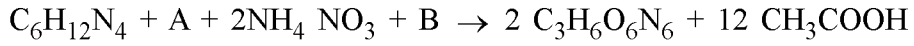
- 22 નીચેની પ્રક્રિયામાંથી મળતી નીપજો A અને B ઓળખો :  
Identify the product A and B from the following reaction :



23 નીચેની પ્રક્રિયામાંથી મળતી નીપજો A અને B ઓળખો :



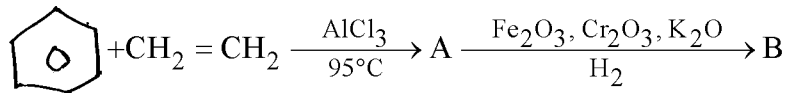
Identify the product A and B from the following reaction :



- (A)  $A = 6HNO_3$ ,  $B = 4 [CH_3CO]_2O$   
 (B)  $A = 4HNO_3$ ,  $B = 6 [CH_3CO]_2O$   
 (C)  $A = 3HCHO$ ,  $B = 6 [CH_3CO]_2O$   
 (D)  $A = 6HCHO$ ,  $B = 3 [CH_3CO]_2O$

24 નીચેની પ્રક્રિયામાંથી મળતી નીપજો A અને B ઓળખો :

Identify the product A and B from the following reaction



- (A)  $A = \text{Cyclohexane with } CH_3 \text{ group}$ ,  $B = \text{Cyclohexane with } CH=CH_2 \text{ group}$   
 (B)  $A = \text{Cyclohexane with } CH=CH-CH_3 \text{ group}$ ,  $B = \text{Cyclohexane with } CH_2-CH_3 \text{ group}$   
 (C)  $A = \text{Cyclohexane with } CH_2-CH_2-CH_3 \text{ group}$ ,  $B = \text{Cyclohexane with } C_2H_5 \text{ group}$   
 (D)  $A = \text{Cyclohexane with } CH_2-CH_3 \text{ group}$ ,  $B = \text{Cyclohexane with } CH=CH_2 \text{ group}$

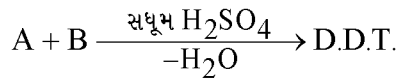
25 ઈઓસીનના સંશ્લેષણમાં A અને B વપરાય છે.

- (A) A = બીટા નેફથોલ, B = થેલીક એનહાઇડ્રાઇડ  
 (B) A = રિસોસીનોલ, B = એસેટિક એનહાઇડ્રાઇડ  
 (C) A = રિસોસીનોલ, B = થેલીક એનહાઇડ્રાઇડ  
 (D) A = મેટાડાયનાઇટ્રોબેન્ઝીન, B = થેલીક એનહાઇડ્રાઇડ

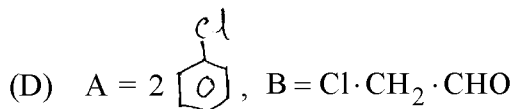
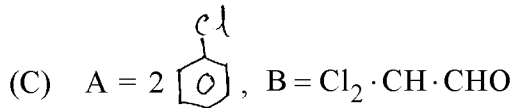
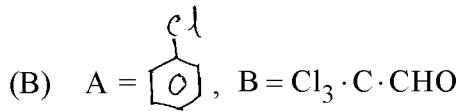
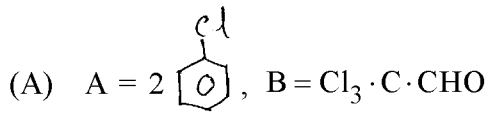
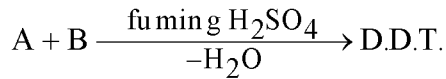
A and B are used in the synthesis of Eosin

- (A) A = Beta Naphthol, B = Pthalic anyhdride  
 (B) A = Resorcinol, B = Acetic anhydride  
 (C) A = Resorcinol, B = Pthalic anhydride  
 (D) A = Metadinitrobenzene, B = Pthalic anhydride

26 નીચેની પ્રક્રિયામાં પ્રક્રિયકો A અને B ઓળખો :

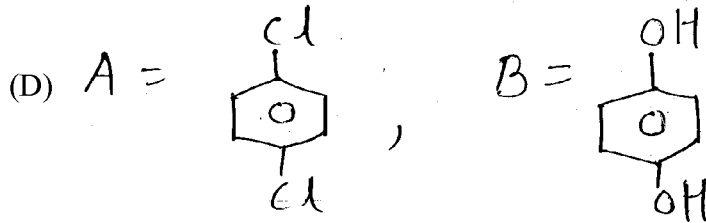
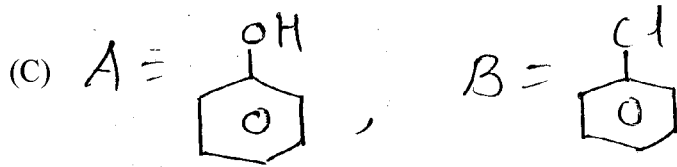
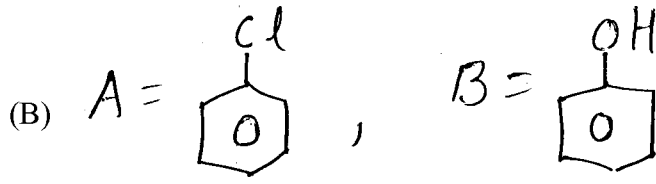
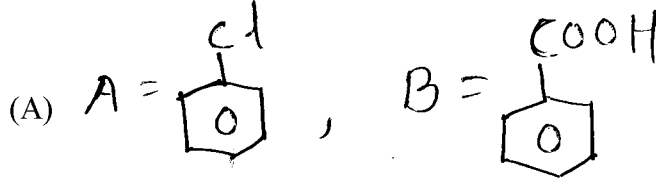
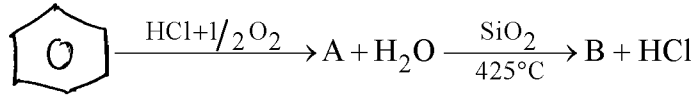


Identify the reactants A and B in the following reaction :



27 નીચેની પ્રક્રિયામાંથી મળતી નીપજો A અને B ઓળખો :

Identify the product A and B from the following reaction :



28 એસિટિલિન બનાવવા માટે A અને B પદ્ધતિ જાણીતી છે.

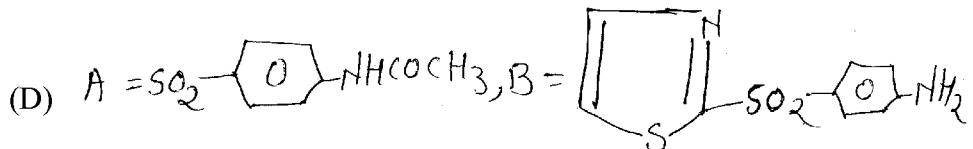
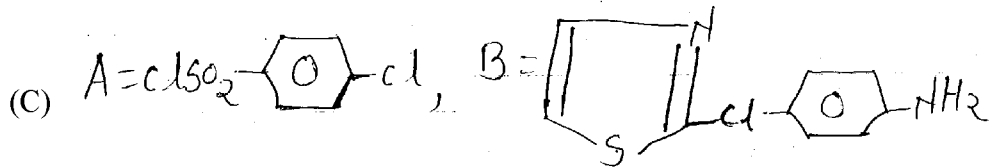
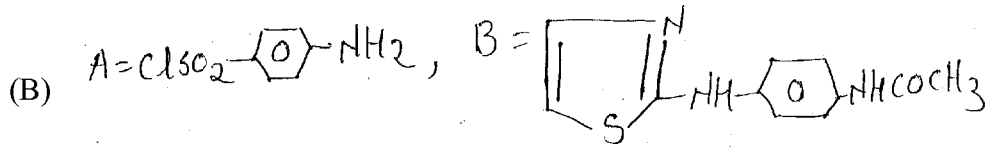
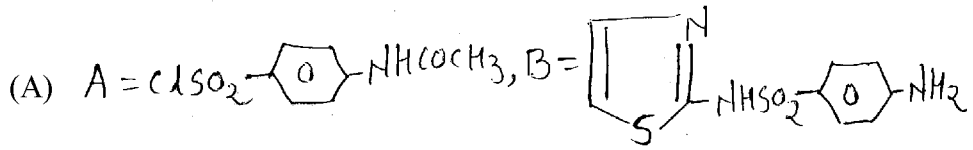
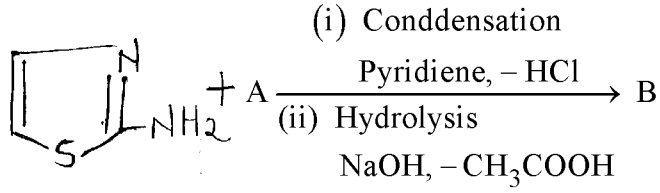
- (A) A = રાશિગ પદ્ધતિ, B = ક્યુમિન પદ્ધતિ  
 (B) A = ડાઉ પદ્ધતિ, B = ક્યુમિન પદ્ધતિ  
 (C) A = નિષ્કંદન પદ્ધતિ, B = એર-ઓક્સિડેશન પદ્ધતિ  
 (D) A = વુલ્ફ પદ્ધતિ, B = સાક્સે પદ્ધતિ

A and B are known processes for the manufacture of Acetylene.

- (A) A = Raschig process, B = Cumene process  
 (B) A = Dow process, B = Cumene process  
 (C) A = Distillation process, B = Air-oxidation process  
 (D) A = Wulff process, B = Sachsse process

29 પ્રક્રિયા પૂર્ણ કરો :

Complete the reaction :



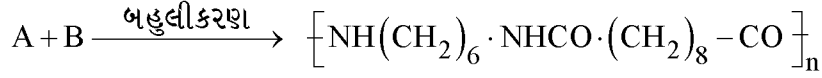
30 નીચે પૈકી કયા બે કાર્બનિક પદાર્થોનું બહુલીકરણ કરતાં ટેરિલીન મળે છે ?

- (A) પ્રોપીલીન અને ઈથીલીન
- (B) ટરપ્થેલિક એસિડ અને ઈથીલીન
- (C) D.M.T. અને ઈથીલીન ગ્લાયકોલ
- (D) D.M.T. અને ઈથીલીન ઓક્સાઈડ

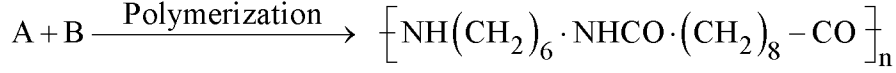
Which of the following two organic compounds polymerize to form Terylene?

- (A) Propylene and Ethylene
- (B) Terphthalic acid and Ethylene
- (C) D.M.T. and Ethylene glycol
- (D) D.M.T. and Ethylene oxide

31 નીચેની પ્રક્રિયામાં A અને B ઓળખો :



Identify A and B in the following reaction



- (A)  $A = n\text{H}_2\text{N}(\text{CH}_2) \cdot \text{NH}_2$ ,  $B = n\text{HOOC} \cdot (\text{CH}_2) \cdot \text{COOH}$   
 (B)  $A = n\text{H}_2\text{N}(\text{CH}_2)_6 \cdot \text{NH}_2$ ,  $B = n\text{HOOC} \cdot (\text{CH}_2)_8 \cdot \text{COOH}$   
 (C)  $A = n\text{H}_2\text{N}(\text{CH}_2)_8 \cdot \text{NH}_2$ ,  $B = n\text{HOOC} \cdot (\text{CH}_2)_6 \cdot \text{COOH}$   
 (D)  $A = n\text{H}_2\text{N}(\text{CH}_2)_6 \cdot \text{NH}_2$ ,  $B = n\text{HOOC} \cdot (\text{CH}_2)_6 \cdot \text{COOH}$

32 બેકેલાઈટ A અને B માંથી બને છે.

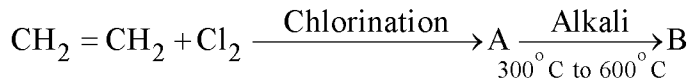
- (A) A = ફિનોલ, B = ફોર્માલ્ડીહાઈડ  
 (B) A = D.M.T., B = ઇથીલીન ગ્લાયકોલ  
 (C) A = એડિપિક એસિડ, B = H.M.D.A.  
 (D) A = યુરિયા, B = ફોર્માલ્ડીહાઈડ

Bakelite is formed from A and B

- (A) A = Phenol, B = Formaldehyde  
 (B) A = D.M.T., B = Ethylene glycol  
 (C) A = Adipic acid, B = H.M.D.A.  
 (D) A = Urea, B = Formaldehyde

33 પ્રક્રિયા પૂર્ણ કરો -

Complete the reaction :



- (A)  $A = \text{CH}_2 \cdot \text{CH}_2 \cdot \text{Cl}$ ,  $B = \text{Cl} \cdot \text{CH} = \text{CH}_2$   
 (B)  $A = \text{CHCl}_3$ ,  $B = \text{CH}_2 = \text{CH}_2$   
 (C)  $A = \text{Cl}_2 - \text{CH}_2 - \text{CH}_2 \cdot \text{Cl}_2$ ,  $B = \text{ClCH}_2 = \text{CH}_2 \cdot \text{Cl}$   
 (D)  $A = \text{Cl} \cdot \text{CH}_2 \cdot \text{CH}_2 \cdot \text{Cl}$ ,  $B = \text{Cl} \cdot \text{CH} = \text{CH}_2$

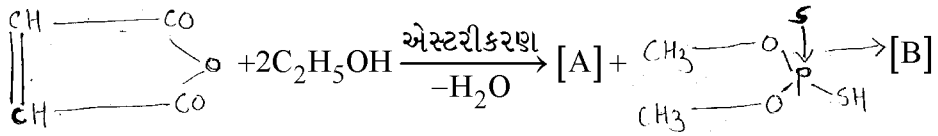
34 એલિઝરીનના સંશ્લેષણમાં કયા બે પદાર્થો વપરાય છે ?

- (A) થેલિક એસિડ અને બેન્ઝીન
- (B) થેલેમાઈડ અને બેન્ઝીન
- (C) થેલિક એનહાઈડ્રાઈડ અને બેન્ઝીન
- (D) થેલિક એનહાઈડ્રાઈડ અને ફિનોલ

Which two substances are used in the synthesis of Alizarine ?

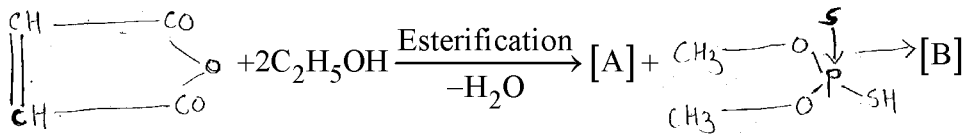
- (A) Phthalic acid and Benzene
- (B) Phthalamide and Benzene
- (C) Phthalic anhydride and Benzene
- (D) Phthalic anhydride and Phenol

35 નીચેના પ્રક્રિયામાંથી મળતી નીપજો A અને B ઓળખો :



- (A) A = ડાઈમિથાઈલ મેલેટ, B = મેલાથિયોન
- (B) A = ડાઈઈથાઈલ મેલેટ, B = મેલાથિયોન
- (C) A = ડાઈઈથીલીન મેલેટ, B = મેલાથિયોન
- (D) A = ડાઈમિથિલીન મેલેટ, B = મેલાથિયોન

Identify the product A and B from the following reaction



- (A) A = Dimethyl Maleate, B = Malathion
- (B) A = Diethyl Maleate, B = Malathion
- (C) A = Diethylene Maleate, B = Malathion
- (D) A = Dimethylene Maleate, B = Malathion