



DF-3028

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

March / April – 2016

Industrial Chemistry (I.D.)

Time : 2 Hours]

[Total Marks : 50

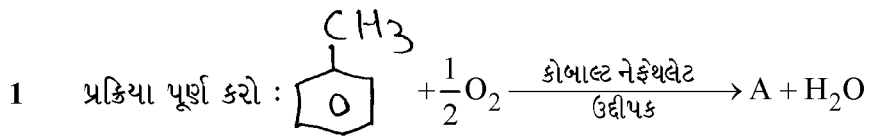
સૂચના / Instructions :

(1)

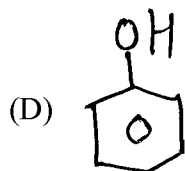
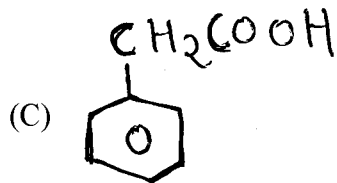
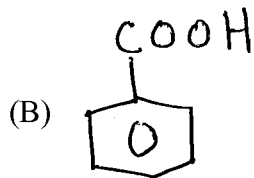
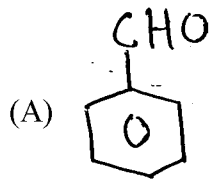
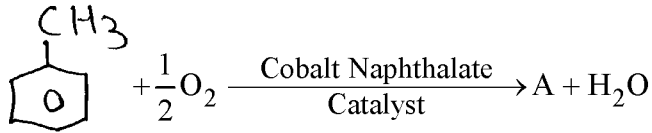
નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
SECOND YEAR B. Sc. (SEM. III)	<input type="text"/>
Name of the Subject :	<input type="text"/>
INDUSTRIAL CHEMISTRY (I.D.)	<input type="text"/>
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.***



Complete the reaction :



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

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

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

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

3 ડી.ડી.ટી.નું આખું નામ જણાવો.

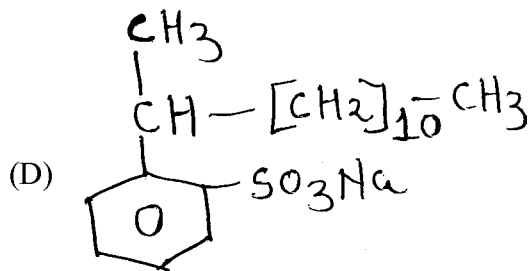
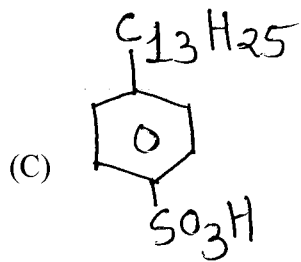
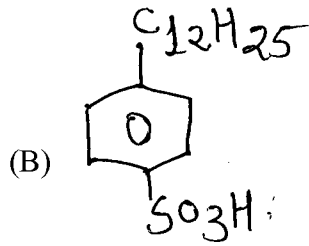
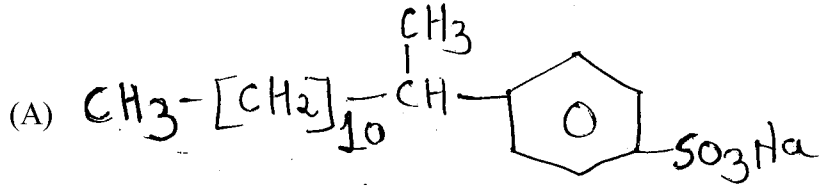
- (A) P-P' ડાઇક્લોરો ડાઇમિથાઇલ ટ્રાઇક્લોરો ઇથેન
- (B) P-P' ટ્રાઇક્લોરો ડાઇઇથાઇલ ટ્રાઇક્લોરો ઇથેન
- (C) P-P' ડાઇક્લોરો ડાઇફિનાઇલ ટ્રાઇક્લોરો ઇથેન
- (D) P-P' ટ્રાઇક્લોરો ટ્રાઇફિનાઇલ ટ્રાઇક્લોરો ઇથેન

Give full form of D.D.T.

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

4 L.A.S. નું બંધારણીય સૂત્ર આપો :

Give structural formula of L.A.S.



- 5 મેલ્યુબ્રીનનું N-મિથાઈલ વ્યુત્પન્ન છે.
 (A) પેલ્યુડ્રીન
 (B) નોવાલ્જીન
 (C) એમિનો પાયરીન
 (D) નોવોકેન
 _____ is N-methyl derivative of Melubrin.
 (A) Paludrine
 (B) Novalgin
 (C) Aminopyrine
 (D) Novocaine
- 6નું બ્યુટાડિન સાથે સહબહુલીકરણ કરી SBR નામનું સાશ્લેષિક રબર બનાવવામાં આવે છે.
 (A) ઈથાઈલ બેન્ઝિન
 (B) એક્રિલોનાઈટ્રિલ
 (C) ક્લોરોપ્રીન
 (D) સ્ટાઈરિન
 _____ reacts with butadiene by co-polymerization to form a synthetic rubber named, SBR.
 (A) Ethyl-benzene
 (B) Acrylonitrile
 (C) Chloroprene
 (D) Styrene
- 7 પોલિવિનાઈલ ક્લોરાઈડ (PVC)નો ઉપયોગ ની બનાવટમાં થાય છે.
 (A) સુશોભન લેમિનેટ્સ
 (B) કાર્પેટ અને ફર્નિચર
 (C) રેઈનકોટ અને લેક્સ
 (D) લેમિનેટેડ ડ્રવ્યો
 Polyvinyl chloride (PVC) is used in the preparation of _____
 (A) Decorative laminates
 (B) Carpet and furniture
 (C) Raincoat and lacquers
 (D) Laminated materials
- 8 ઈઓસીનનો મુખ્યત્વે ઉપયોગ શું છે ?
 (A) લાલ રંગની શાહી બનાવવા માટે
 (B) E.D.T.A. ના અનુમાપનમાં સૂચક તરીકે
 (C) સુતરાઉ કાપડ રંગવા માટે
 (D) સફેદ રંગક તરીકે
 What is the main use of Eosin ?
 (A) To prepare red coloured ink
 (B) As an indicator in the titration of E.D.T.A.
 (C) For dyeing cotton cloth
 (D) Used as white dye

9 નાઈટ્રોગ્લિસરીન અને સેલ્યુલોઝ નાઈટ્રેટનું મિશ્રણ નામથી ઓળખાય છે.

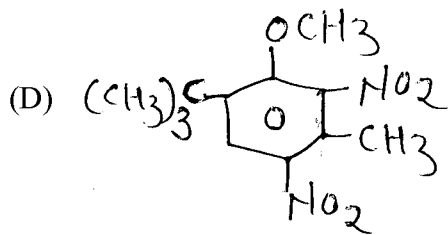
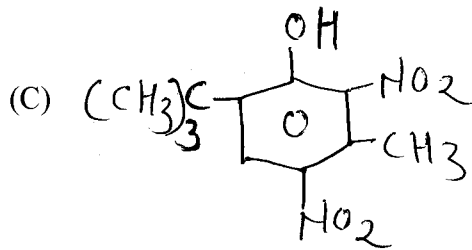
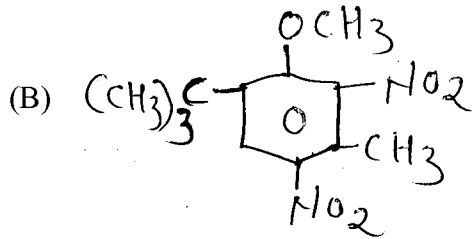
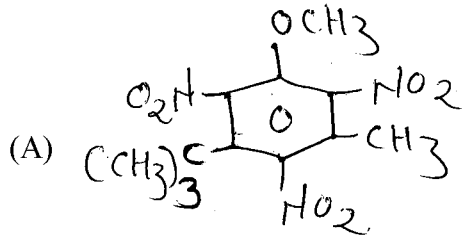
- (A) કોરડાઈટ
- (B) બ્લાસ્ટિંગ જીલેટીન
- (C) હેક્ઝોનિટ
- (D) આધુનિક ડાયનેમાઈટ

The mixture of nitroglycerin and cellulose-nitrate is known as _____

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

10 મસ્ક અમ્બરિટનું બંધારણીય સૂત્ર આપો :

Give the structural formula of Musk Ambrette



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

15 પોલિટેટ્રાફ્લોરોઇથીલીન એ તરીકે પણ ઓળખાય છે.

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

Polytetrafluoroethylene is also known as -

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

16 નીચેના પૈકીમાંથી કયું થર્મોસેટિંગ પ્લાસ્ટીક નથી ?

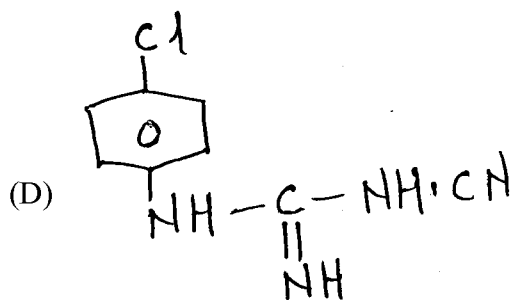
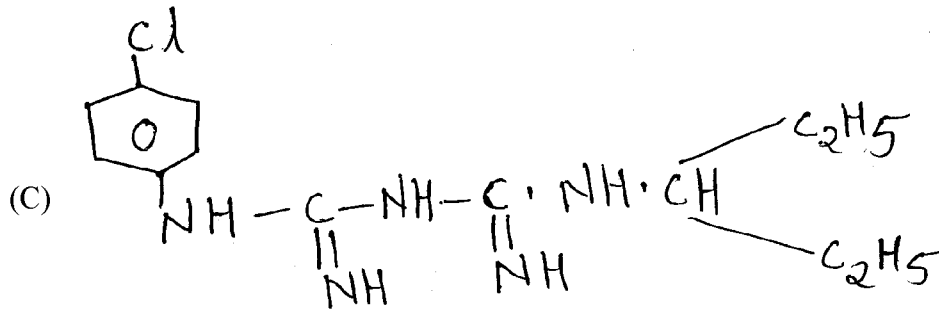
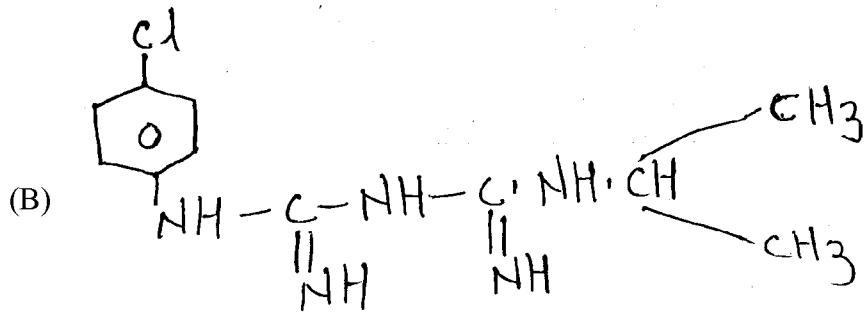
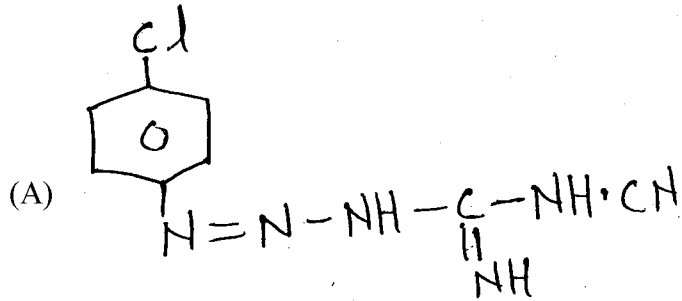
- (A) યુરિયા ફોર્મલ્ડીહાઇડ
- (B) મેલેમાઇન
- (C) બેકેલાઇટ
- (D) પોલિવિનાઇલ ક્લોરાઇડ

Which of the following is not thermosetting plastic ?

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

17 પેલ્યુડ્રીનનું બંધારણીય સૂત્ર છે.

The structural formula of paludrine is



18 નાયલોન-6 પ્રકારના રેષાઓનું ઉદાહરણ છે.

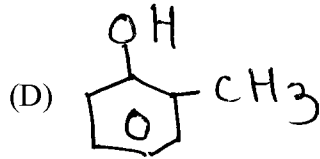
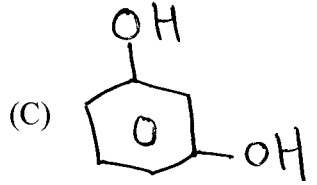
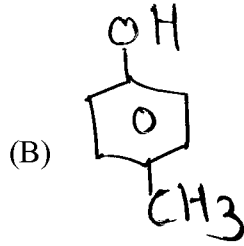
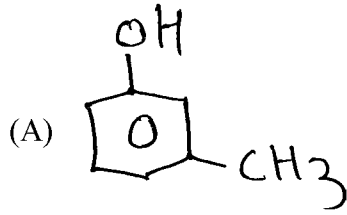
- (A) કુદરતી
- (B) ફ્લોરોકાર્બન
- (C) પોલિએમાઇડ
- (D) પોલિએસ્ટર્સ

Nylon-6 is an example of _____ type of the fibre.

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

19 MCPA કયા પદાર્થમાંથી બનાવાય છે ?

From which substance MCPA is synthesized ?



20 એમિટોલ શું છે ?

- (A) 20% TNT + 80% NH_4NO_3 નું મિશ્રણ
- (B) 80% TNP + 20% NH_4NO_3 નું મિશ્રણ
- (C) 50% TNT + 50% NH_4NO_3 નું મિશ્રણ
- (D) 80% TNT + 20% NH_4NO_3 નું મિશ્રણ

Which is Amitol ?

- (A) 20% TNT + 80% mixture of NH_4NO_3
- (B) 80% TNP + 20% mixture of NH_4NO_3
- (C) 50% TNT + 50% mixture of NH_4NO_3
- (D) 80% TNT + 20% mixture of NH_4NO_3

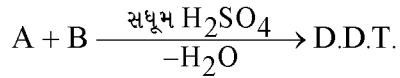
21 ઈઓસીનના સંશ્લેષણમાં A અને B વપરાય છે.

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

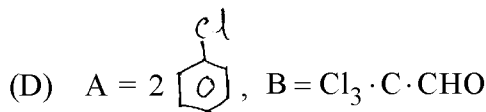
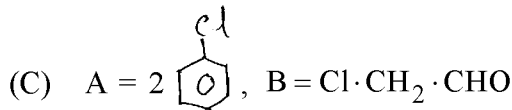
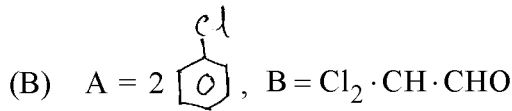
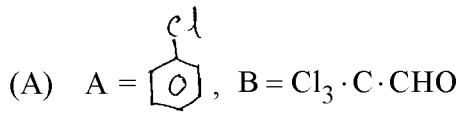
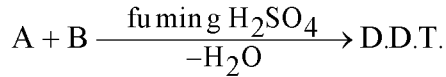
A and B are used in the synthesis of Eosin

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

22 નીચેની પ્રક્રિયામાં પ્રક્રિયકો A અને B ઓળખો :

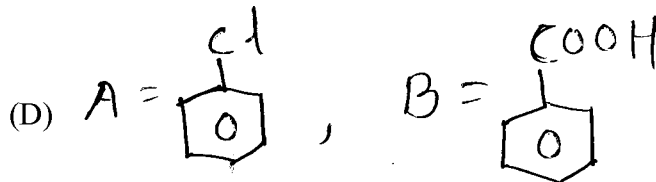
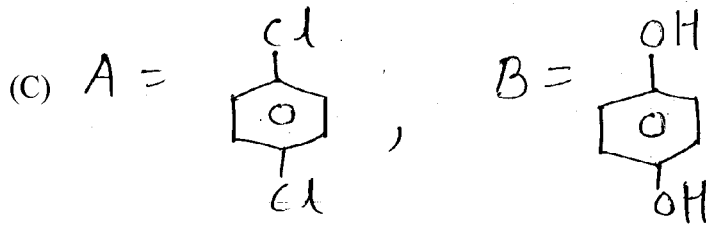
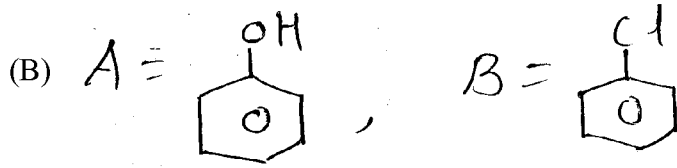
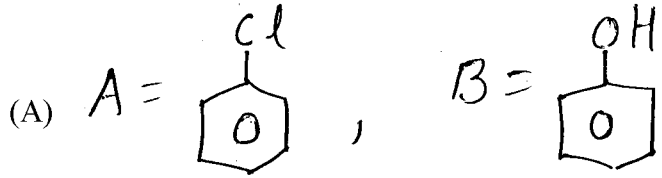
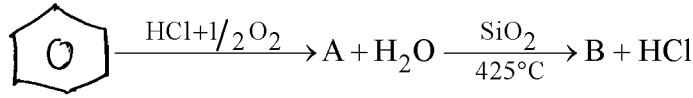


Identify the reactants A and B in the following reaction :



23 નીચેની પ્રક્રિયામાંથી મળતી નીપજો A અને B ઓળખો :

Identify the product A and B from the following reaction :



24 એસિટિલિન બનાવવા માટે A અને B પદ્ધતિ જાણીતી છે.

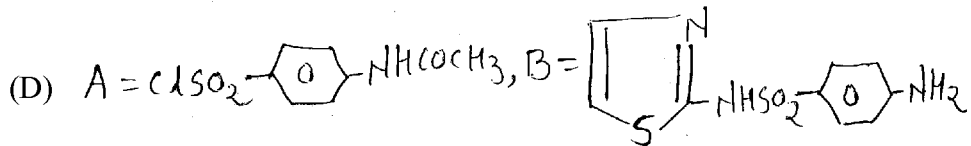
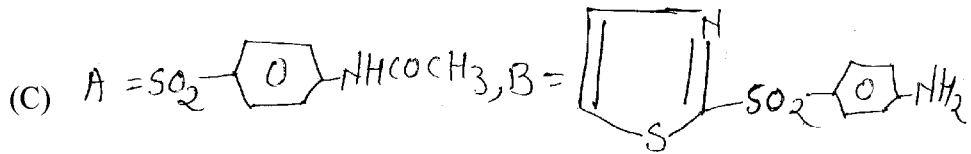
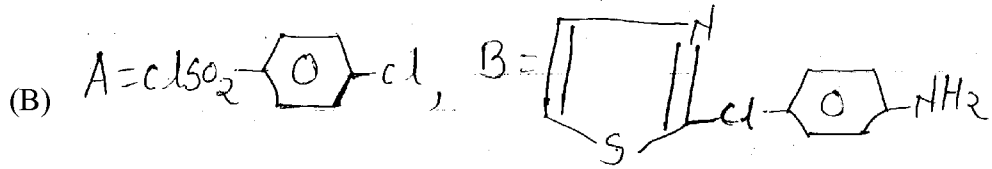
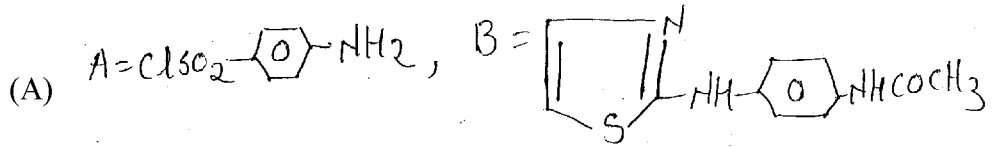
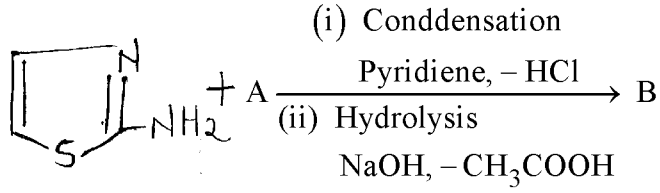
- (A) A = ડાઉ પદ્ધતિ, B = ક્યુમિન પદ્ધતિ
 (B) A = નિષ્કંદન પદ્ધતિ, B = એર-ઓક્સિડેશન પદ્ધતિ
 (C) A = વુલ્ફ પદ્ધતિ, B = સાક્સે પદ્ધતિ
 (D) A = રાશિગ પદ્ધતિ, B = ક્યુમિન પદ્ધતિ

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

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

25 પ્રક્રિયા પૂર્ણ કરો :

Complete the reaction :



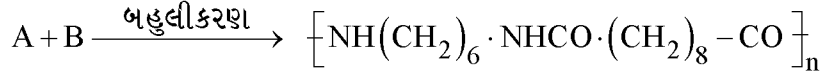
26 નીચે પૈકી કયા બે કાર્બનિક પદાર્થોનું બહુલીકરણ કરતાં ટેરિલીન મળે છે ?

- (A) ટરપ્થેલિક એસિડ અને ઇથીલીન
- (B) D.M.T. અને ઇથીલીન ગ્લાયકોલ
- (C) D.M.T. અને ઇથીલીન ઓક્સાઇડ
- (D) પ્રોપીલીન અને ઇથીલીન

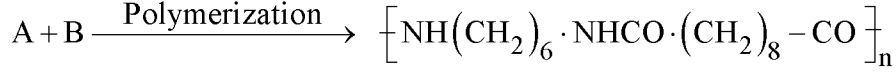
Which of the following two organic compounds polymerize to form Terylene?

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

27 નીચેની પ્રક્રિયામાં A અને B ઓળખો :



Identify A and B in the following reaction



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

28 બેકેલાઈટ A અને B માંથી બને છે.

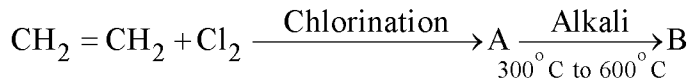
- (A) $A = \text{D.M.T.}$, $B = \text{ઇથીલીન ગ્લાયકોલ}$
 (B) $A = \text{એડિપિક એસિડ}$, $B = \text{H.M.D.A.}$
 (C) $A = \text{યુરિયા}$, $B = \text{ફોર્મલ્ડેહાઇડ}$
 (D) $A = \text{ફિનોલ}$, $B = \text{ફોર્મલ્ડેહાઇડ}$

Bakelite is formed from A and B

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

29 પ્રક્રિયા પૂર્ણ કરો -

Complete the reaction :



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

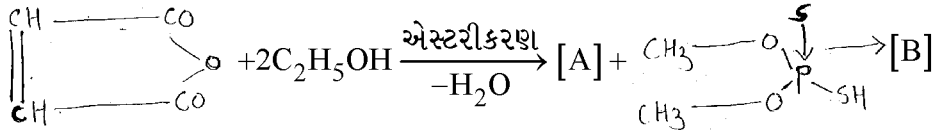
30 એલિઝરીનના સંશ્લેષણમાં કયા બે પદાર્થો વપરાય છે ?

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

Which two substances are used in the synthesis of Alizarine ?

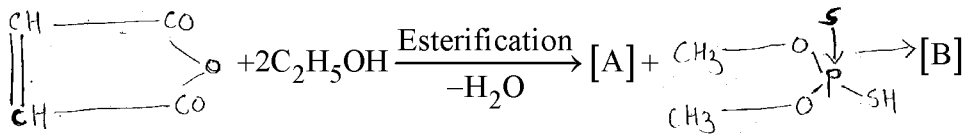
- (A) Pthalamide and Benzene
- (B) Pthalic anhydride and Benzene
- (C) Pthalic anhydride and Phenol
- (D) Pthalic acid and Benzene

31 નીચેના પ્રક્રિયામાંથી મળતી નીપજો A અને B ઓળખો :



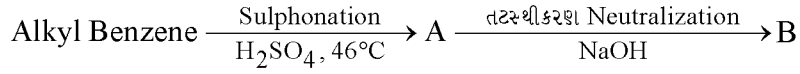
- (A) A = ડાઈઈથાઈલ મેલેટ, B = મેલાથિયોન
- (B) A = ડાઈઈથીલીન મેલેટ, B = મેલાથિયોન
- (C) A = ડાઈમિથિલીન મેલેટ, B = મેલાથિયોન
- (D) A = ડાઈમિથાઈલ મેલેટ, B = મેલાથિયોન

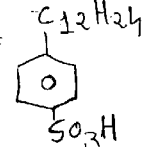
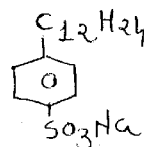
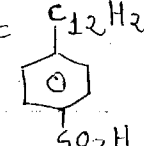
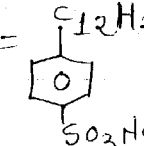
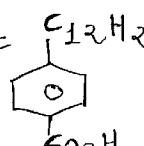
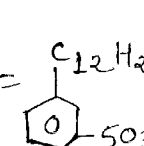
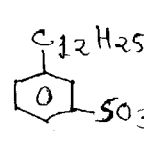
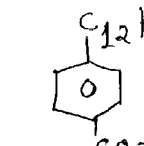
Identify the product A and B from the following reaction



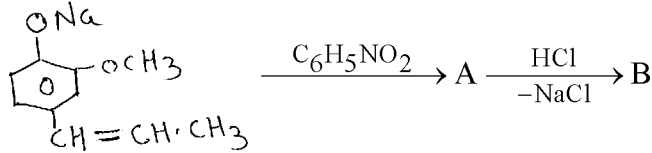
- (A) A = Diethyl Maleate, B = Malathion
- (B) A = Diethylene Maleate, B = Malathion
- (C) A = Dimethylene Maleate, B = Malathion
- (D) A = Dimethyl Maleate, B = Malathion

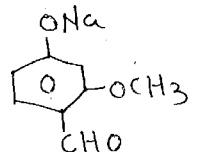
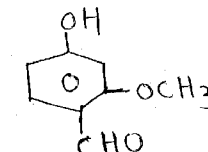
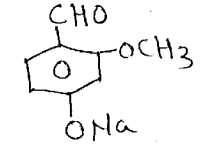
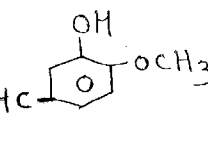
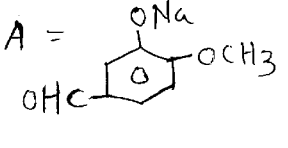
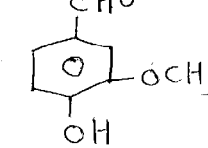
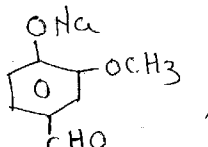
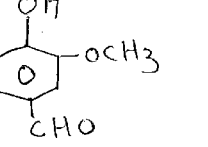
- 32 નીચેની પ્રક્રિયામાંથી મળતી નીપજો A અને B ઓળખો. આલ્કાઇલ બેન્ઝીન
Identify the product A and B from the following reaction :



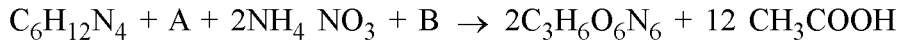
- (A) $A = \text{C}_{12}\text{H}_{24}$  , $B = \text{C}_{12}\text{H}_{24}$ 
- (B) $A = \text{C}_{12}\text{H}_{25}$  , $B = \text{C}_{12}\text{H}_{25}$ 
- (C) $A = \text{C}_{12}\text{H}_{24}$  , $B = \text{C}_{12}\text{H}_{25}$ 
- (D) $A = \text{C}_{12}\text{H}_{25}$  , $B = \text{C}_{12}\text{H}_{25}$ 

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

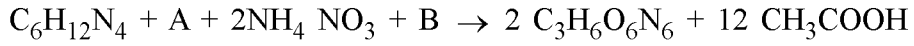


- (A) $A = \text{C}_6\text{H}_3(\text{ONa})(\text{OCH}_3)(\text{CHO})$  , $B = \text{C}_6\text{H}_3(\text{OH})(\text{OCH}_3)(\text{CHO})$ 
- (B) $A = \text{C}_6\text{H}_3(\text{CHO})(\text{OCH}_3)(\text{ONa})$  , $B = \text{C}_6\text{H}_3(\text{OH})(\text{OCH}_3)(\text{CHO})$ 
- (C) $A = \text{C}_6\text{H}_3(\text{ONa})(\text{OCH}_3)(\text{CHO})$  , $B = \text{C}_6\text{H}_3(\text{CHO})(\text{OCH}_3)(\text{OH})$ 
- (D) $A = \text{C}_6\text{H}_3(\text{ONa})(\text{OCH}_3)(\text{CHO})$  , $B = \text{C}_6\text{H}_3(\text{OH})(\text{OCH}_3)(\text{CHO})$ 

34 નીચેની પ્રક્રિયામાંથી મળતી નીપજો A અને B ઓળખો :



Identify the product A and B from the following reaction :



- (A) A = 4HNO₃, B = 6 [CH₃CO]₂O
 (B) A = 3HCHO, B = 6 [CH₃CO]₂O
 (C) A = 6HCHO, B = 3 [CH₃CO]₂O
 (D) A = 6HNO₃, B = 4 [CH₃CO]₂O

35 નીચેની પ્રક્રિયામાંથી મળતી નીપજો A અને B ઓળખો :

Identify the product A and B from the following reaction

