मध्यप्रदेश लोक सेवा आयोग
रेसीडेन्सी एरिया
इन्दौर

क्रमांक : 208 /69/2011/प–9 इन्दौर, दिनांक–**23.07.2018**

अंतिम उत्तर कुंजी

–:: विज्ञप्ति ::–

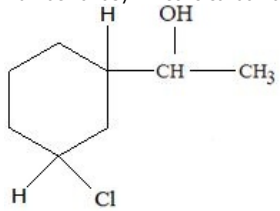
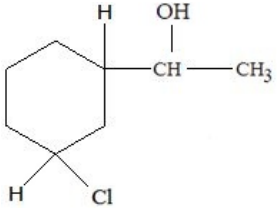
सहायक प्राध्यापक परीक्षा–2017 के संदर्भ में आयोग द्वारा जारी विज्ञप्ति क्रमांक 125/69/2011/प–9 दिनांक 01.07.2018 के अंतर्गत प्रावधिक उत्तर कुंजी परीक्षा परिणाम बनाने के पूर्व आयोग की वेबसाईट पर प्रकाशित की गई थी। अभ्यर्थियों से प्राप्त ऑनलाईन आपत्तियों का विषय विशेषज्ञों द्वारा परीक्षण किया गया तथा समस्त ऑनलाईन आपत्तियों का सूक्ष्म परीक्षण करने के पश्चात **विषय–कार्बनिक रसायन** प्रश्न पत्र की अनुशंसित संशोधित अंतिम उत्तर कुंजी बनाई गई है। यह अंतिम उत्तर कुंजी है। इस अंतिम उत्तर कुंजी के आधार पर परीक्षा परिणाम तैयार किया जायेगा। अतः अब इस संबंध में अभ्यार्थियों की किसी प्रकार की आपत्तियों/अभ्यावेदनो पर विचार नहीं किया जायेगा। अभ्यर्थी आयोग की वेबसाईट पर अपना रोल नंबर एवं प्रवेश पत्र पर दिये गये पासवर्ड की सहायता से लॉग–इन कर अपनी रिस्पांस शीट का अवलोकन कर सकते हैं। यह विज्ञप्ति आयोग की वेबसाईट www.mppsc.nic.in, www.mppsc.com & www.mppscdemo.in पर दिनांक **23.07.2018** से उपलब्ध है।

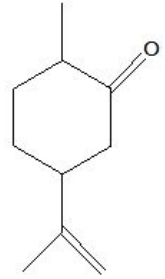
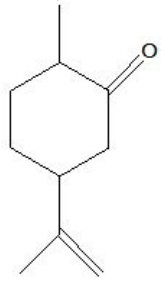
(डॉ. पी.सी. यादव)
परीक्षा नियंत्रक

Assistant Professor Exam - 2017

(Final Answer Key)

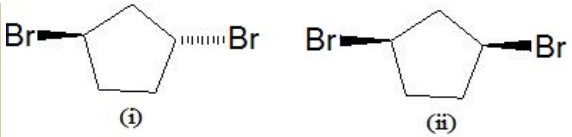
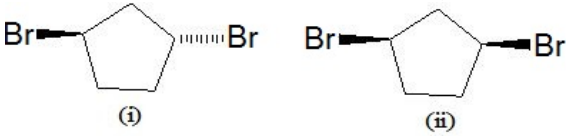
Organic Chemistry

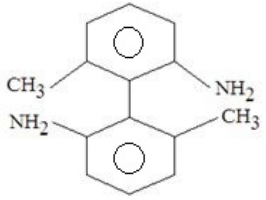
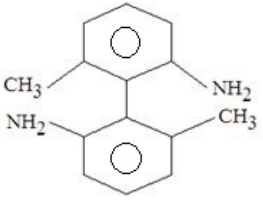
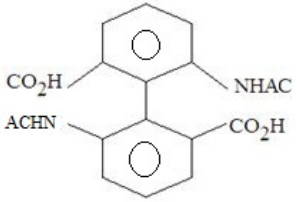
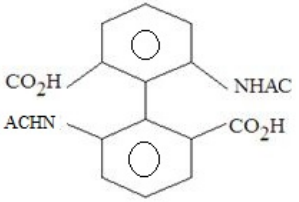
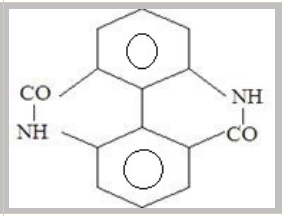
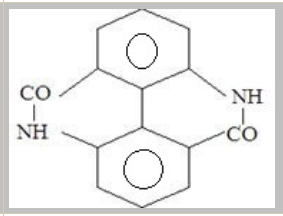
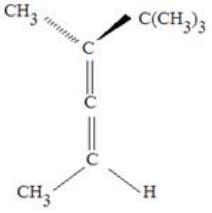
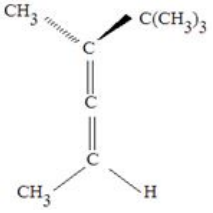
Q.No: 1	Number of asymmetric carbon atoms in the following compound is: 	निम्नलिखित यौगिक मे असमयित कार्बन परमाणुओं की संख्या होगी 
A	**1**	**1**
B	**2**	**2**
C	**3**	**3**
D	**4**	**4**

Q.No: 2	The Configuration of asymmetric carbon atom in the following compound can be specified as 	नीचे दिए गये यौगिक मे असमयित कार्बन परमाणु का विन्यास होगा- 
A	**R**	**R**
B	**S**	**S**
C	**RS**	**RS**
D	**SR**	**SR**
Question Deleted		

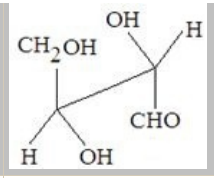
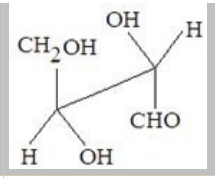
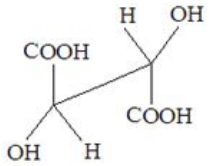
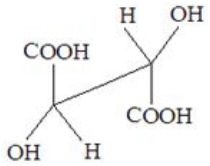
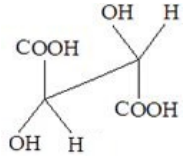
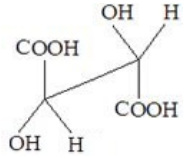
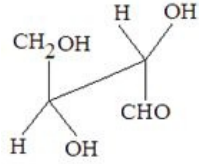
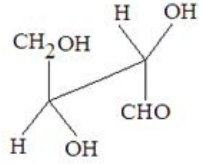
Q.No: 3	Isomers which are mirror image of each others are known as:	समावयवी जो एक दूसरे की दर्पण प्रतिबिम्ब हैं, कहे जाते हैं:
A	**Enantiomers**	**एनैन्टियोमर्स**
B	**Diastereoisomers**	**डाइस्टिरियोआइसोमर्स**
C	**Conformers**	**कॉनफार्मस**
D	**Anomers**	**एनोमर्स**

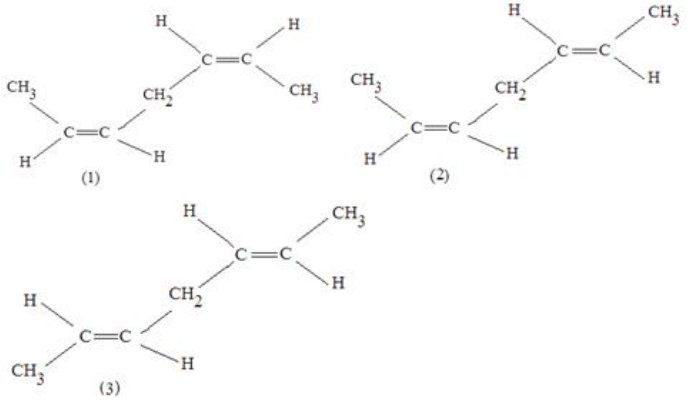
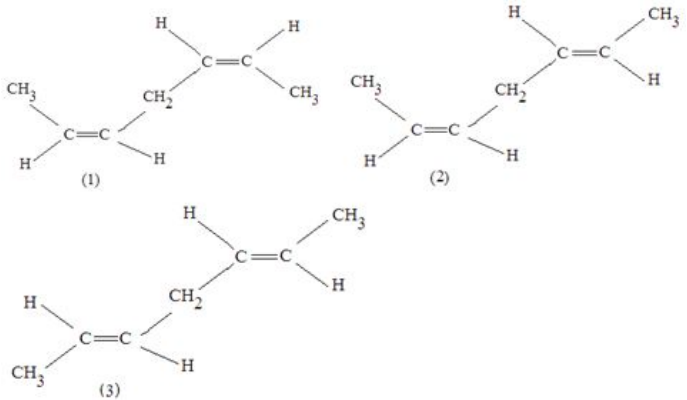
Q.No: 4	What is the stereochemical relationship between the following compounds?	

		निम्नलिखित यौगिको मे किस प्रकार का त्रिविम रासायनिक सम्बन्ध है ? 
A	**Enantiomers**	**ऐनैन्टियोमर्स**
B	**Diastereoisomers**	**डाइस्टिरियो आइसोमर्स**
C	**Both are meso**	**दोनों मिजो यौगिक है**
D	**Both are same**	**दोनों समान है**

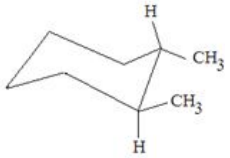
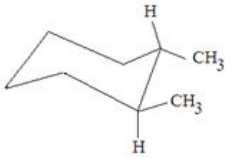
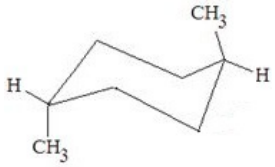
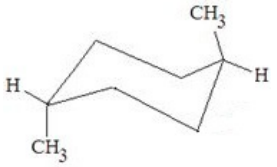
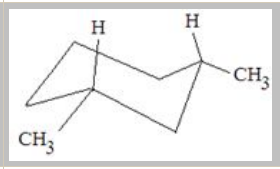
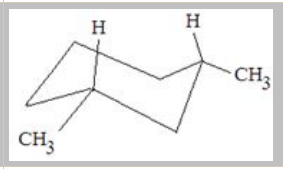
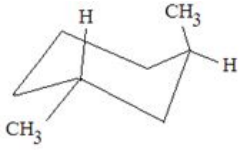
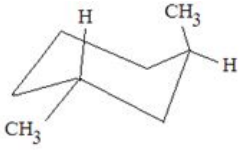
Q.No: 5	Which one among the following compounds will not show optical activity?	निम्नलिखित यौगिको में से कौन ध्रुवण घुर्णकता नही दिखायेगा ?
A		
B		
C		
D		

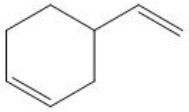
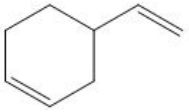
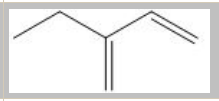
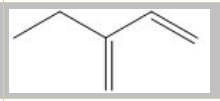
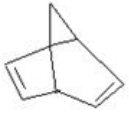
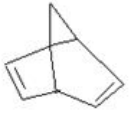
Q.No: 6	Which one among the following represents an erythro isomer?	निम्नलिखित में से कौन इरिथ्रो समावयवी है ?
A		

		
B		
C		
D		

Q.No: 7	Which of the following compounds has Z, E configuration? 	निम्न यौगिको में से किसका विन्यास Z, E है ? 
A	**1**	**1**
B	**2**	**2**
C	**3**	**3**
D	**1 and 2**	**1 और 2**

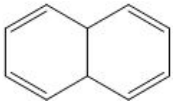
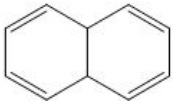
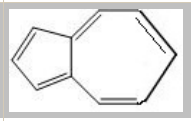
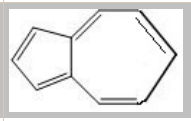
Q.No: 8	Which of the following is a cis isomer?	निम्न में से कौन सिस समावयवी है ?

A		
B		
C		
D		

Q.No: 9	Which of the following is the example of a conjugated diene?	निम्न में से कौन संयुग्मी (कोन्जुगेटेड) डाइन का उदाहरण है ?
A		
B		
C		
D		

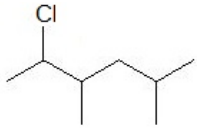
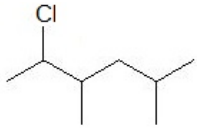
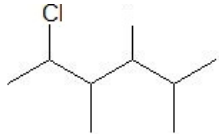
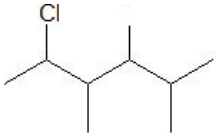
Q.No: 10	C_{60} has	C_{60} मे होते है
A	**14 Pentagons and 18 hexagons**	**14 पंचभुज व 18 षडभुज**
B	**10 Pentagons and 20 hexagons**	**10 पंचभुज व 20 षडभुज**
C	**12 Pentagons and 20 hexagons**	**12 पंचभुज व 20 षडभुज**

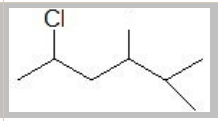
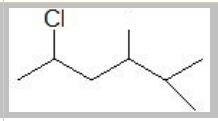
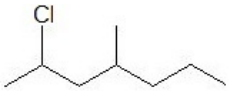
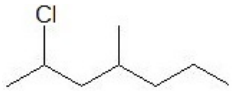
D	**12 Pentagons and 18 hexagons**	**12 पंचभुज व 18 षडभुज**

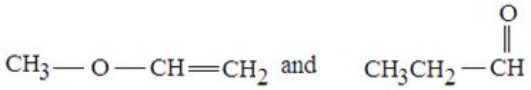
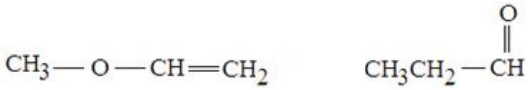
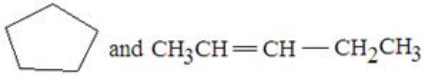
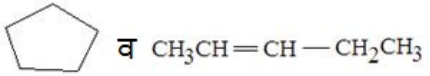
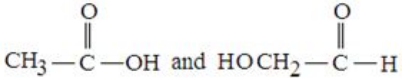
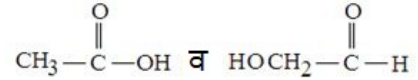
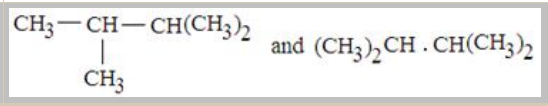
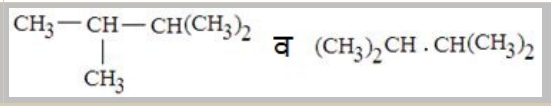
Q.No: 11	Which of the following compounds is aromatic?	निम्नलिखित यौगिकों में से कौन ऐरोमैटिक है ?
A		
B		
C		
D		

Q.No: 12	Which of the following is not a requirement for aromaticity?	निम्नलिखित में से कौन सी स्थिति ऐरोमेटिसिटी के लिए आवश्यक नही है ?
A	**Structure must be planer**	**संरचना समतलीय होनी चाहिए**
B	**Molecule must be bicyclic**	**यौगिक द्विचक्रीय होना चाहिए**
C	**(4n+2)π electons must be present**	**(4n+2)π इलेक्ट्रान होने चाहिए**
D	**Each atom in ring must have hybridized p orbital**	**चक्र के हर परमाणु के पास एक असंकरित p कक्षक होना चाहिए**

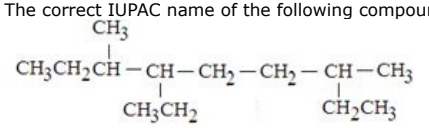
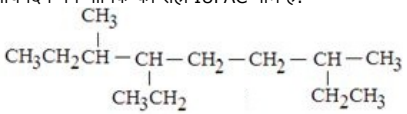
Q.No: 13	Bond angle of HC$\equiv$N is	HC≡N का वंधक कोण है
A	**90°**	**90°**
B	**108°**	**108°**
C	**120°**	**120°**
D	**180°**	**180°**

Q.No: 14	The correct bond-line formula of the compound, CH_3 CHCl CH_2 CH (CH_3)CH $(CH_3)_2$ will be:	CH_3 CHCl CH_2 CH (CH_3)CH $(CH_3)_2$ का सही बंधरेखित फार्मूला (बान्ड-लाइन फार्मूला) है:
A		
B		

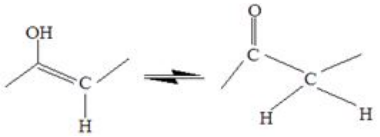
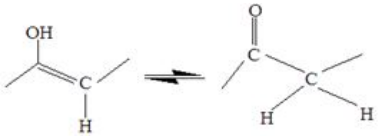
C		
D		

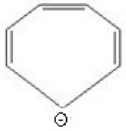
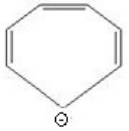
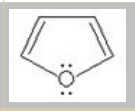
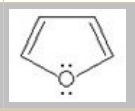
Q.No: 15	Which of the following pairs of compounds is not a pair of constitutional isomers?	निम्नलिखित में से कौन सा यौगिक युग्म संघटनात्मक समावयवी नही है?
A		
B		
C		
D		

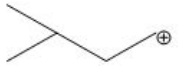
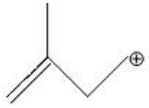
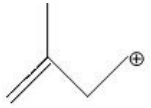
Q.No: 16	How many Isomers are possible for C_3H_7Br?	C_3H_7Br के कितने समावयवी सम्भावित है ?
A	**1**	**1**
B	**2**	**2**
C	**3**	**3**
D	**4**	**4**

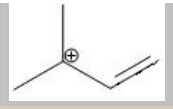
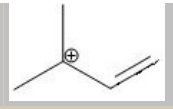
Q.No: 17	The correct IUPAC name of the following compound is: 	नीचे दिये गये यौगिक का सही IUPAC नाम है: 
A	**2, 5-Diethyl-6-methyl octane**	**2,5-डाईइथाइल-6-मिथाइल ऑक्टेन**
B	**4, 7-Diethyl-3-methyl octane**	**4,7-डाईइथाइल-3-मिथाइल ऑक्टेन**
C	**4-Ethyl-3,7-dimethyl nonane**	**4-इथाइल-3,7-डाइमिथाइल नोनेन**
D	**6-Ethyl-3,7-dimethyl nonane**	**6-इथाइल-3,7-डाइमिथाइल नोनेन**

Q.No: 18	Which amongst the following is not an example of tautomerism?	निम्नलिखित में से कौन टॉटामेरिज्म का उदाहरण नही है ?
A		

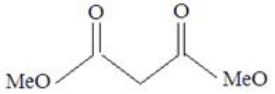
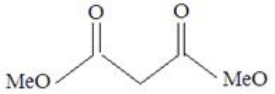
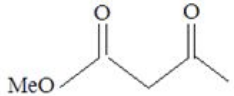
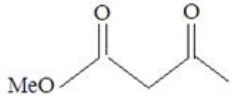
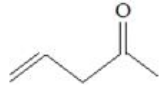
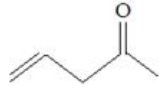
		
B		
C		
D		

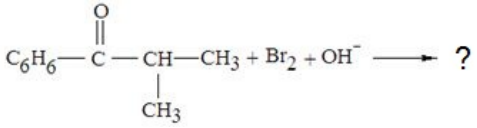
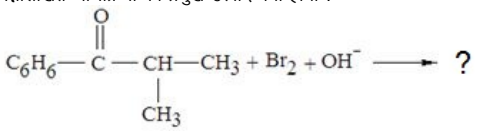
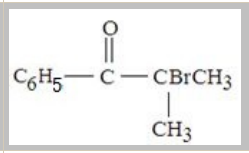
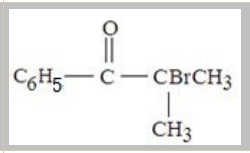
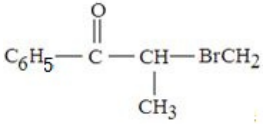
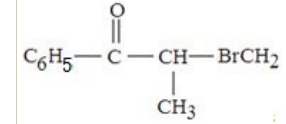
Q.No: 19	Which of the following structures represent an aromatic compound?	निम्नलिखित में से कौन सी संरचना ऐरोमैटिक यौगिक को दर्शाती है ?
A		
B		
C		
D		

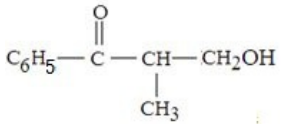
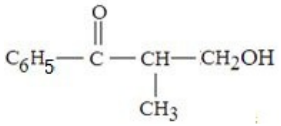
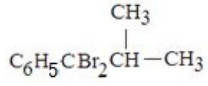
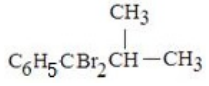
Q.No: 20	Which carbocation is the most stable?	निम्नलिखित कार्बोकेटायनो मे कौन सबसे अधिक स्थायी है ?
A		
B		
C		
D		

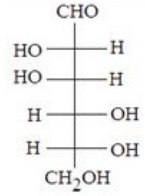
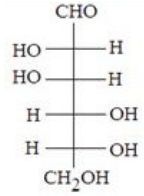
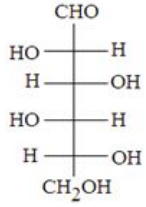
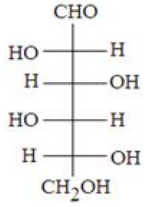
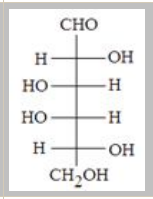
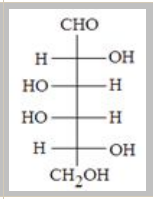
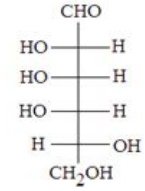
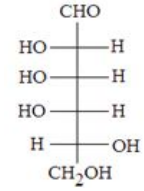
		

Q.No: 21	Which of the following reactions involve a carbene intermediate?	निम्नलिखित अभिक्रियायों में कौन सी अभिक्रिया कार्बीन की मध्यस्था से होती है ?
A	**Reformatsky reaction**	**रिफार्मेटस्की अभिक्रिया**
B	**Reimer-Tiemann reaction**	**रीमर-टीमेन अभिक्रिया**
C	**Wittig reaction**	**वीटिग अभिक्रिया**
D	**Perkin reaction**	**परकिन अभिक्रिया**

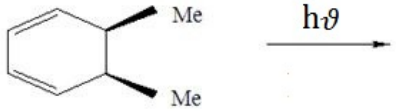
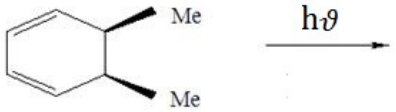
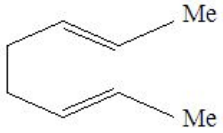
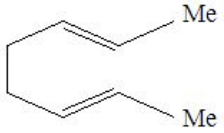
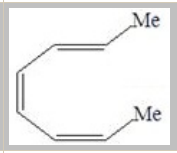
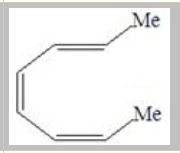
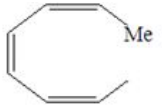
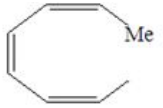
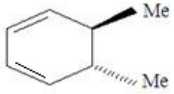
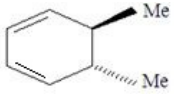
Q.No: 22	Which among the following compounds form a carbanion most easily when a base is added?	निम्नलिखित यौगिकों में से कौन सबसे आसानी से क्षार की उपस्थिति में कार्बेनायन बनायेगा ?
A		
B		
C		
D		

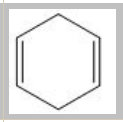
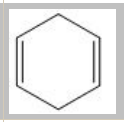
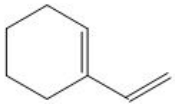
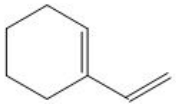
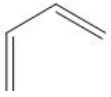
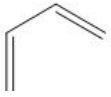
Q.No: 23	What would be the major product of the following reaction? 	निम्नलिखित अभिक्रिया का प्रमुख उत्पाद क्या होगा ? 
A		
B		
C		

		
D		

Q.No: 24	Which of the following monosaccharides yields an optically enactive additol on $NaBH_4$ reduction?	निम्नलिखित मोनोसैकराइडों में से कौन $NaBH_4$ से अपचयन करने के उपरान्त प्रकाशीय निष्क्रिय ऐल्डिटॉले देगा ?
A		
B		
C		
D		

Q.No: 25	Hydrolysis of (+) sucrose (ordinary table sugar) yields:	सुक्रोज (साधारण शक्कर) जल अपघटन द्वारा देती है ?
A	**D-Glucose**	**D-ग्लूकोज**
B	**D-Mannose**	**D-मैनोज**
C	**D-Fructose**	**D-फ्रक्टोज**
D	**Both (D-Glucose) and (D-Fructose)**	**(D-ग्लूकोज) एवं (D-फ्रक्टोज)**

Q.No: 26	The product obtained during the following photochemical reaction is: 	निम्न प्रकाशरसायनिक अभिक्रिया का उत्पाद होगा- 
A		
B		
C		
D		

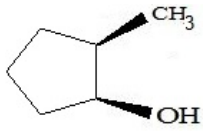
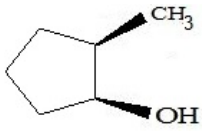
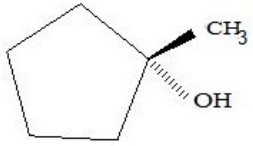
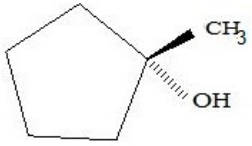
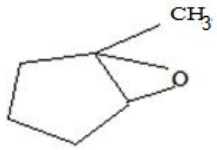
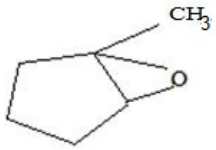
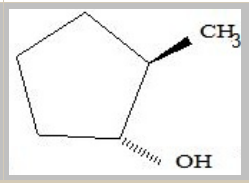
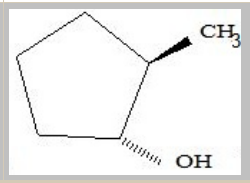
Q.No: 27	Which of the following dienes will not take part in Diel's Alder reaction?	निम्नलिखित डाँइनो में कौन डॉइल्स आल्डर अभिक्रिया में भाग नहीं लेगा ?
A		
B		
C		
D		

Q.No: 28	Which of the following reactions proceeds without formation of any intermediate?	नीचे दर्शायी गयी किस अभिक्रिया में अभिक्रिया मध्यस्थ नहीं बनता है ?
A	**S_N1 reaction**	**S_N1 अभिक्रिया**
B	**S_N2 reaction**	**S_N2 अभिक्रिया**

C	**S_Ni reaction**	**S_Ni अभिक्रिया**
D	**ArS_N1 reaction**	**ArS_N1 अभिक्रिया**

Q.No: 29	Which of the folllowing species is paramagnetic in nature?	निम्नलिखित में से कौनसी स्पीशीज़ अनुचुम्बकीय है ?
A	**Carbocation**	**कार्बोकेटायन**
B	**Carbanion**	**कार्बेनायन**
C	**Free radicals**	**मुक्तमूलक**
D	**All of these**	**सभी सही है**

Q.No: 30	Among the following reduction reactions which one gives the free radical intermediate?	निम्नलिखित अपचयन अभिक्रियायो में से कौनसी अभिक्रिया मुक्त मूलक मध्यवर्ती प्रदान करती है ?
A	**Clemmensen reduction**	**क्लीमेन्सेन अपचयन**
B	**Birch reduction**	**बर्क अपचयन**
C	**Wolff kishner reduction**	**वुल्फ किशनर अपचयन**
D	**Meerwein ponndrof verly reduction**	**मीरवीन पोन्र्डरोफ वरली अपचयन**

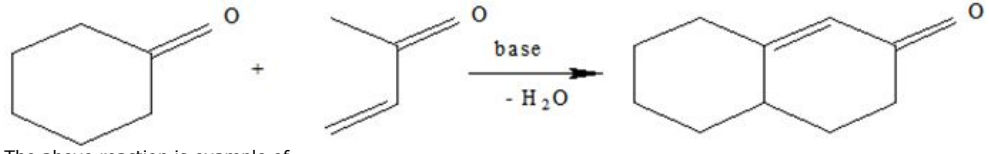
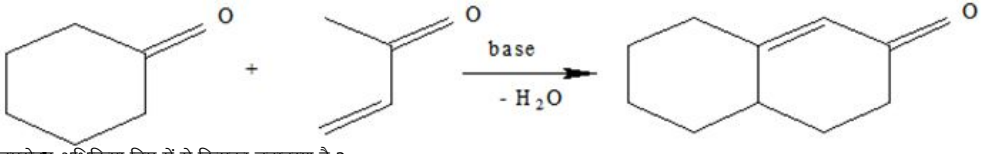
Q.No: 31	The major product formed during the hydroboration-oxidation of 1-methyl cyclo pentene is:	1-मिथाइल साइक्लोपेंटीन के हाइड्रोवोरेसन-आक्सीकरण का प्रमुख उत्पाद है:
A		
B		
C		
D		

Q.No: 32	Trans-cyclohexane -1, 2-diol can be obtained by the reaction of cyclohexane with which of the following regent?	ट्रान्स-साइक्लोहेक्जेन -1,2 डाइऑल प्राप्त करने के लिये साइक्लोहेक्जीन की अभिक्रिया निम्नलिखित में से किस अभिकर्मक के साथ करेंगे ?
A	**$KMno_4$**	**$KMno_4$**
B	**OsO_4**	**OsO_4**

C	**Performic acid**	**परफार्मिक अम्ल**
D	**Seo_2**	**Seo_2**
Question Deleted		

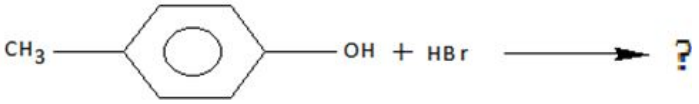
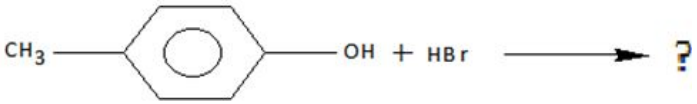
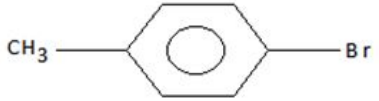
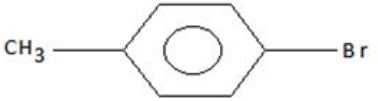
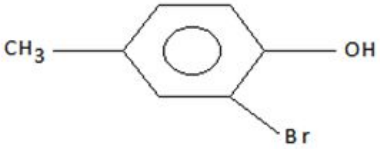
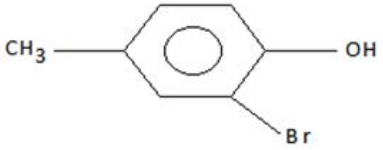
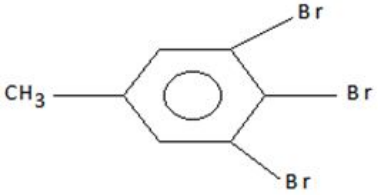
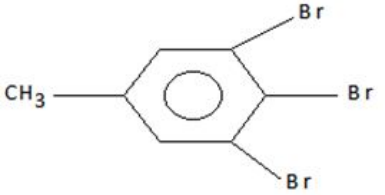
Q.No: 33	$CH_3\ CH_2\ Br + C_2H_5O^- \longrightarrow CH_2=CH_2 + C_2H_5\ OH + Br^-$ Above given reaction is an example of the type-	$CH_3\ CH_2\ Br + C_2H_5O^- \longrightarrow CH_2=CH_2 + C_2H_5\ OH + Br^-$ उपरोक्त अभिक्रिया उदाहरण है:-
A	**E_1 Reaction**	**E_1 अभिक्रिया की**
B	**E_2 Reaction**	**E_2 अभिक्रिया की**
C	**E_1cB Reaction**	**E_1cB अभिक्रिया की**
D	**None of these**	**इनमें से कोई नहीं**

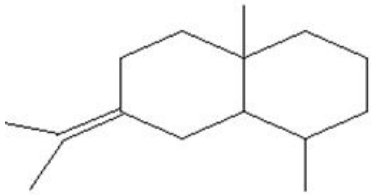
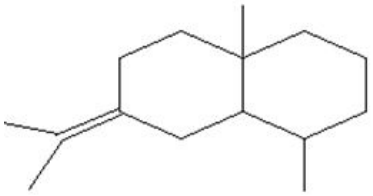
Q.No: 34	 Above transormation is feasible by	 उपरोक्त परिवर्तन संभव हैं-
A	**Thermal disrotary process**	**तापीय डिसरोटेटरी प्रक्रिया द्वारा**
B	**Photo-chemical disrotary process**	**प्रकाशरसासनिक डिसरोटेटरी प्रक्रिया द्वारा**
C	**Thermal conrotatory process**	**तापीय कॉनरोटेटरी प्रक्रिया द्वारा**
D	**Photochemical conrotary process**	**प्रकाश-रसायनिक कॉनरोटेटरी प्रक्रिया द्वारा**
Question Deleted		

Q.No: 35	 The above reaction is example of-	 उपरोक्त अभिक्रिया निम्न में से किसका उदाहरण है ?
A	**Aldol condensation**	**एल्डाल संघनन**
B	**Robinson annulation**	**रॉबिन्सन एनुलेशन**
C	**Dieckmann condensation**	**डिकेमेन संघनन**
D	**Stobbe condensation**	**स्टौबे संघनन**

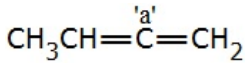
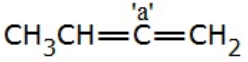
Q.No: 36	Which of the following would br soluble in dilute aqueous HCl?	निम्नलिखित में से कौन तनु जलीय HCl में घुलनशील होगा ?
A	**$C_6H_5NH_2$**	**$C_6H_5NH_2$**
B	**$C_6H_5CH_2NH_2$**	**$C_6H_5CH_2NH_2$**
C	$C_6H_5\overset{\overset{O}{\|}}{C} - NH_2$	$C_6H_5\overset{\overset{O}{\|}}{C} - NH_2$

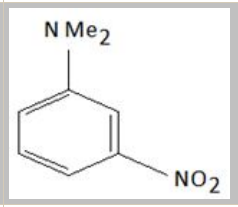
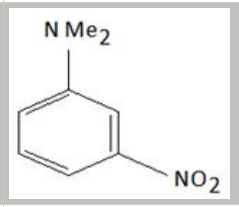
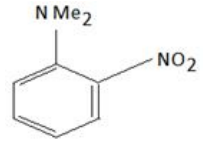
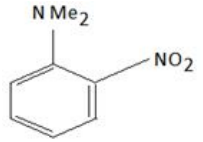
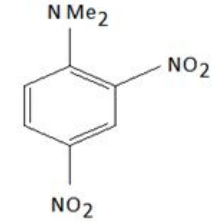
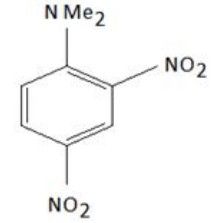
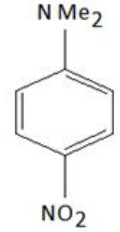
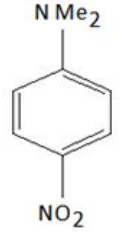
D	**Bothh ($C_6H_5NH_2$) & ($C_6H_5CH_2NH_2$)**	**दोनों ($C_6H_5NH_2$) तथा ($C_6H_5CH_2NH_2$)**

Q.No: 37	Correct product of the following reaction is? 	निम्नलिखित अभिक्रिया का सही उत्पाद है - 
A		
B		
C		
D	**No reaction takes place**	**कोई अभिक्रिया नहीं होगी**

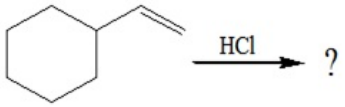
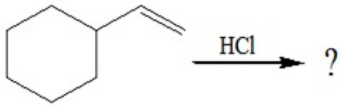
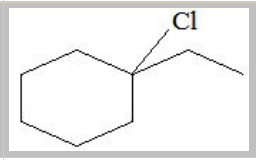
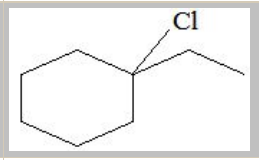
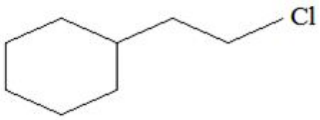
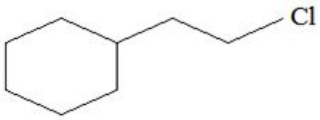
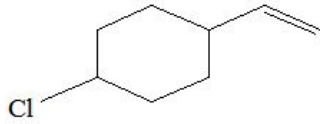
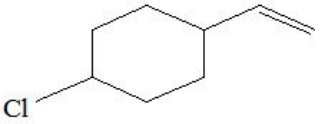
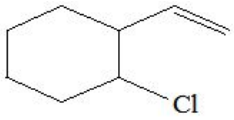
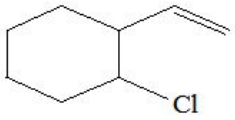
Q.No: 38	 Above compound is-	 उपरोक्त यौगिक है -
A	**Monoterpene**	**मोनोटरपीन**
B	**Sesquiterpene**	**सेसक्वीटरपीन**
C	**Diterpene**	**डाइटरपीन**
D	**Triterpene**	**ट्राईटरपीन**

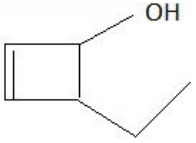
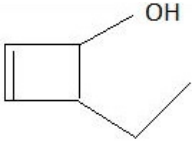
Q.No: 39	The central carbon of carbanion possesses:	कार्बेनआयन के मध्य कार्बन में होते है-
A	**Duet of electron**	**दो इलेक्ट्रान**
B	**Octet of electron**	**आठ इलेक्ट्रान**
C	**Sextet of electron**	**छः इलेक्ट्रान**
D	**None of these**	**इनमें से कोई नहीं**

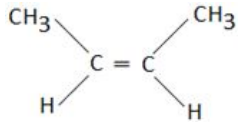
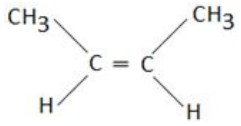
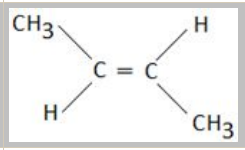
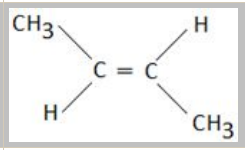
Q.No: 40	The type of hybridisation of carbon marked 'a' in the given molecule is: 	नीचे दिये यौगिक में चिन्हित कार्बन 'a' की संकर अवस्था है- 
A	**sp^2**	**sp^2**
B	**sp**	**sp**
C	**sp^3**	**sp^3**
D	**sp^3d**	**sp^3d**

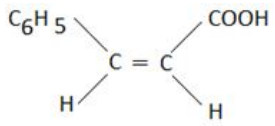
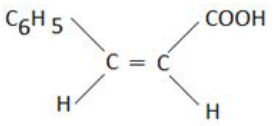
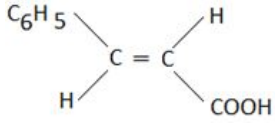
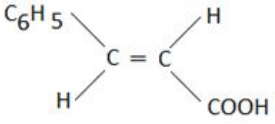
Q.No: 41	The major product formed on nitration of N, N-dimethylaniline with conc H_2So4/HNo_3 mixture is:	N-डाइमिथाइल अमीन की सान्द्र H_2So4/HNo_3 के साथ नाइट्रेशन की अभिक्रिया में बनने वाला मुख्य उत्पाद है
A		
B		
C		
D		

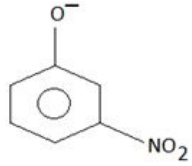
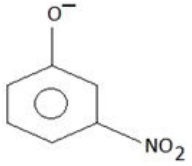
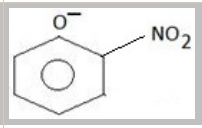
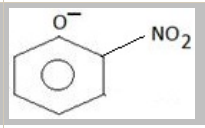
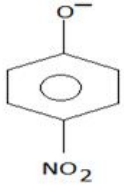
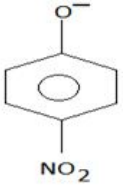
Q.No: 42	The major product of the following reaction is	निम्नलिखित अभिक्रिया का प्रमुख उत्पाद है-

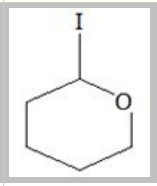
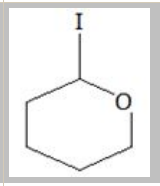
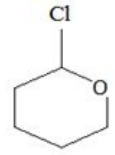
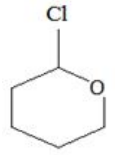
		
A		
B		
C		
D		

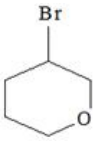
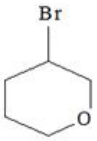
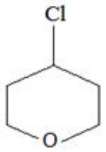
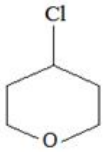
Q.No: 43	The IUPAC name of the following compound is- 	निम्नलिखित यौगिक का IUPAC नाम है- 
A	**3-Ethyl-1-cyclobuten-2-ol**	**3-इथाइल-1-साइक्लोब्युटीन-2-ओल**
B	**4-Ethyl-2-cyclobuten-1-ol**	**4-इथाइल-2-साइक्लोब्युटीन-1-ओल**
C	**2-Ethyl-3-cyclobuten-1-ol**	**2-इथाइल-3-साइक्लोब्युटीन-1-ओल**
D	**4-Ethyl-1-cyclobuten-3-ol**	**4-इथाईल-1-साइक्लोब्युटीन-3-ओल**

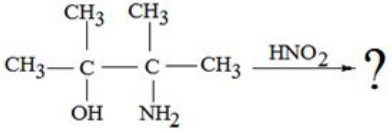
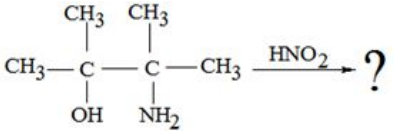
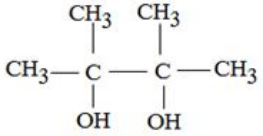
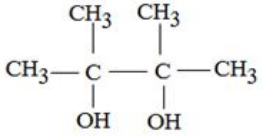
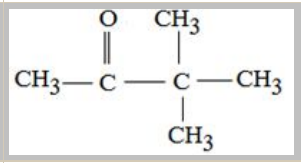
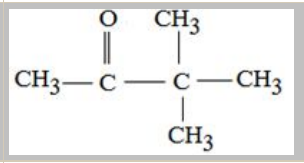
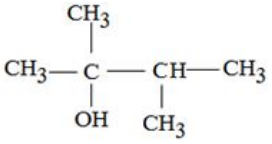
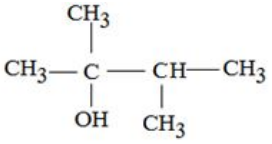
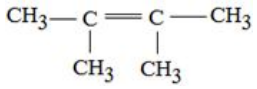
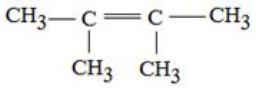
Q.No: 44	Which one of the following alkene on reaction with Br_2 will yield mesocompound?	निम्न में से कौन सी एल्कीन ब्रोमीन Br_2 से अभिक्रिया के उपरान्त मीजो यौगिक बनायेगी ?
A		
B		

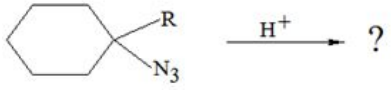
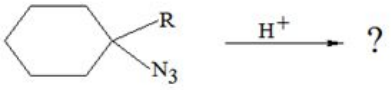
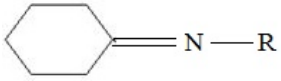
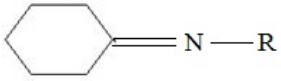
C		
D		

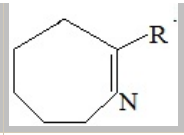
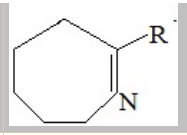
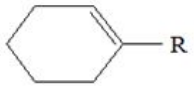
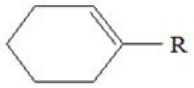
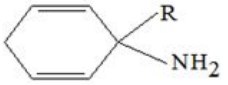
Q.No: 45	Which of the following anion is most stable due to delocalization?	निम्न में से कौन सा ऋणआयन अस्थानीकरण के कारण सबसे ज्यादा स्थायित्व रखता है ?
A	**$C_6H_5O^-$**	**$C_6H_5O^-$**
B		
C		
D		

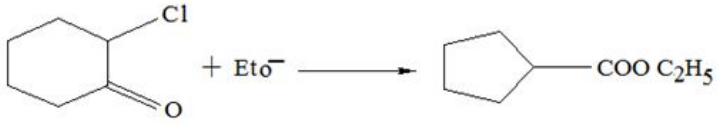
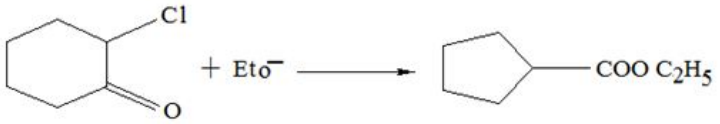
Q.No: 46	Which one of the following compounds will be most reactive for SN^1 reactions?	SN^1 अभिक्रिया के लिये निम्नलिखित यौगिकों में से कौन सबसे अधिक क्रियाशील होगा ?
A		
B		
C		

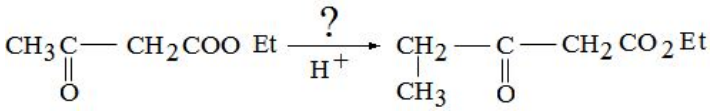
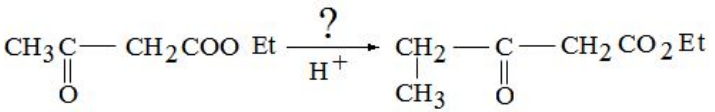
		
D		

Q.No: 47	The product of the following reaction is- 	निम्नलिखित अभिक्रिया का उत्पाद होगा- 
A		
B		
C		
D		

Q.No: 48	Chief product in the following reaction is- 	निम्नलिखित अभिक्रिया में बनने वाला प्रमुख उत्पाद है- 
A		
B		

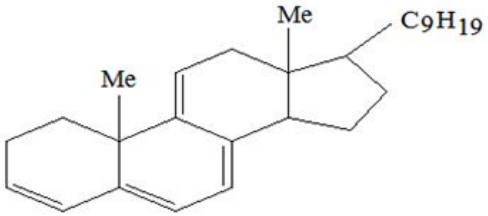
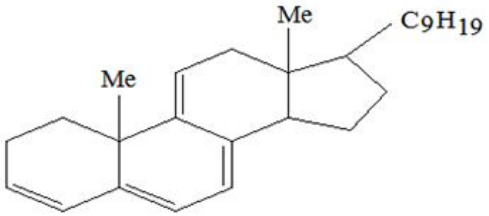
		
C		
D		

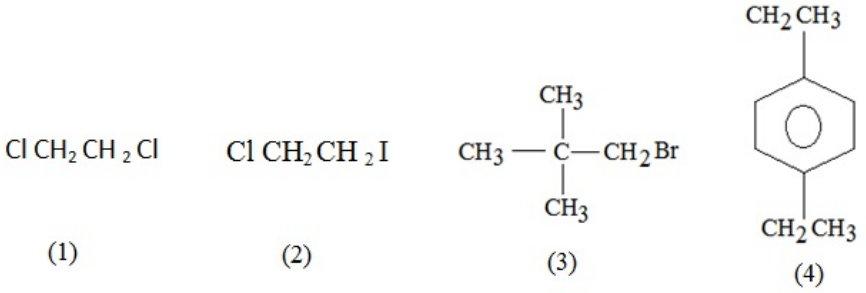
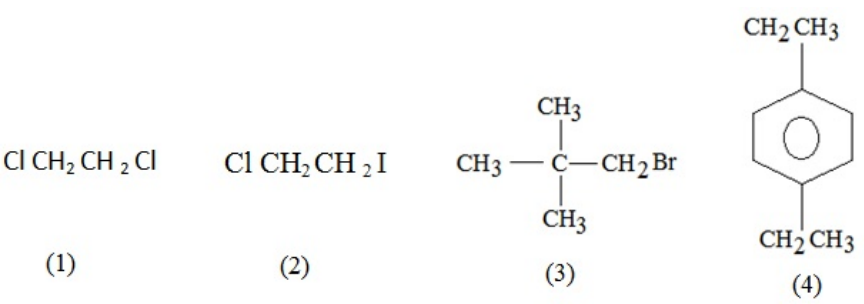
Q.No: 49	The following reaction is the example of which rearrangement reaction? 	निम्नलिखित अभिक्रिया किस तरह की पुनर्विन्यास अभिक्रिया को इंगित करती है ? 
A	**Curtius rearrangement**	**कर्टियस पुनर्विन्यास**
B	**Favorski rearrangement**	**फेवर्स्की पुनर्विन्यास**
C	**Benzil-Benzilic acid rearrangement**	**बेन्जिल-बेन्जिलिक एसिड पुनर्विन्यास**
D	**Pinacol-pincolone rearrangement**	**पिनॉकाल-पिनॉकोलेन पुनर्विन्यास**

Q.No: 50	For completion of the reaction given below, the correct set of reagents are: 	निम्नलिखित अभिक्रिया को पूरा करने के लिए अभिकर्मयों का सबसे उचित समूह है: 
A	**1 mole of NaoH and one mole of CH_3Br**	**एक मोल NaoH और एक मोल CH_3Br**
B	**2 mole of NaoH and two mole of CH_3Br**	**दो मोल NaoH और दो मोल CH_3Br**
C	**2 mole of NaoH and one mole of CH_3Br**	**दो मोल NaoH और एक मोल CH_3Br**
D	**2 mole of NaoH**	**दो मोल NaoH**

Q.No: 51	Which of the following nuclei are not NMR active? ^{13}C, ^{16}O, ^{4}N, ^{31}P, ^{32}S	निम्न में से कौन से नाभिक NMR के लिपे सक्रिय नहीं हैं ? ^{13}C, ^{16}O, ^{4}N, ^{31}P, ^{32}S
A	**^{13}C, ^{16}O, ^{32}S**	**^{13}C, ^{16}O, ^{32}S**
B	**^{16}O, ^{12}C, ^{32}S**	**^{16}O, ^{12}C, ^{32}S**
C	**^{31}P, ^{32}S, ^{14}N**	**^{31}P, ^{32}S, ^{14}N**
D	**All are Inactive**	**सभी निष्क्रिय हैं**

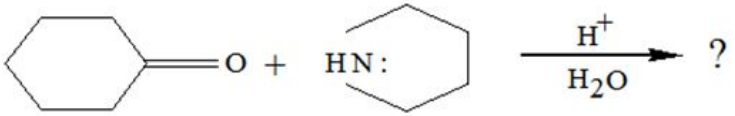
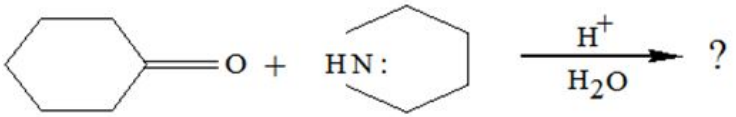
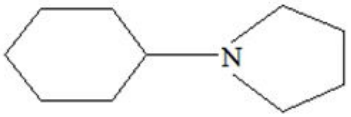
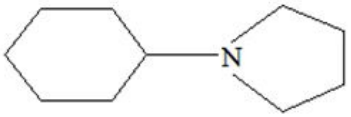
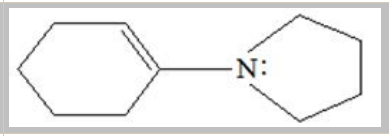
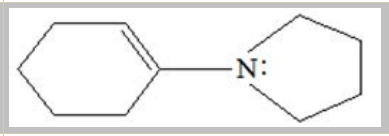
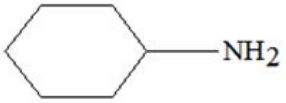
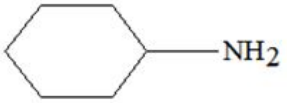
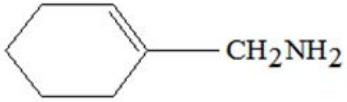
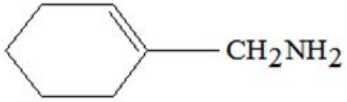
Q.No: 52	λ_{max} of the compound given below is -	दिये गये यौगिक का λ_{max} होगा-

		
A	**390**	**390**
B	**270**	**270**
C	**353**	**353**
D	**250**	**250**

Q.No: 53	In which of the following compounds no spin-spin coupling takes place?  (1) (2) (3) (4)	निम्नलिखित यौगिकों में से किस यौगिक में प्रचक्रण-प्रचक्रण युग्मन नहीं होगा ?  (1) (2) (3) (4)
A	**(1)**	**(1)**
B	**(2)**	**(2)**
C	**(3)**	**(3)**
D	**(4)**	**(4)**
Question Deleted		

Q.No: 54	The molecular formula of hydrocarbon cation with m/z value 29 is	m/z वाले हाइड्रोकार्बन केटॉयन का आंणुविक सूत्र होगा
A	**$C_4H_3^+$**	**$C_4H_3^+$**
B	**$C_7H_7^+$**	**$C_7H_7^+$**
C	**$C_2H_5^+$**	**$C_2H_5^+$**
D	**CH_3^+**	**CH_3^+**

Q.No: 55	What is the possibility of enolization for the cyclobutenone and triketocyclobutane:	साइक्लोब्युटीनोन और ट्राइकीटोसाइक्लो ब्युटेन मे ईनालीकरण की क्या संभ्भवना है ?
A	**Both can enolize**	**दोनो इनोलाइज कर सकते है**
B	**Only cyclobutenone can enolize**	**खाली साइक्लोब्युटीनोन इनोलाइज कप्सकता**
C	**Only triketocyclobutane can enolize**	**खाली ट्राइकीटोसाइक्लोब्युटेन इनोलाइज कप्सकता**
D	**None of these can enolize**	**दोनो में से कोई नही इनोलाइज कर सकता**

Q.No: 56	The product of the following reaction is- 	निम्नलिखित अभिक्रिया का उत्पाद होगा- 
A		
B		
C		
D		

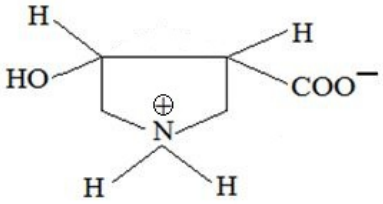
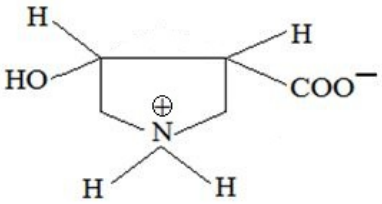
Q.No: 57	Expected product of the manobrommation of quinoline is	क्युनोलीन के मोनोब्रोमिनेसन से बनने वाला उत्पाद होगा-
A	**5-bromoquinoline**	**5-ब्रोमोक्युनोलीन**
B	**8-bromoquinoline**	**8-ब्रोमोक्युनोलीन**
C	**Equal mixture of 5-bromoquinoline and 8-bromoquinoline**	**5-बोमोक्युनोलीन व 8-ब्रोमोवक्युनोलीन की समान मात्रा का मिश्रण**
D	**None of these**	**इनमें से कोई नहीं**

Q.No: 58	The product obtained by heating pyridine with $NaNH_2$, followed by addition of water is-	पिरिडीन को $NaNH_2$ के साथ गरम करने और तदुन्तोपरान्त जल मिलाने पर बनने वाला उत्पाद है-
A	**2-Aminopyridine**	**2-अमीनो पिरिडीन**
B	**3-Aminopyridine**	**3-अमीनोपिरिडीन**
C	**Both of these in equal amounts**	**दोनों की बराबर मात्रा**
D	**No reaction takes place**	**अभिक्रिया नहीं होवी**

Q.No: 59	Which is the anomeric carbon is fructose	फ्रक्टोज का कौन सा कार्बन एनोमेरिक होता है ?
A	**C^1**	**C^1**
B	**C^2**	**C^2**
C	**C^4**	**C^4**
D	**C^6**	**C^6**

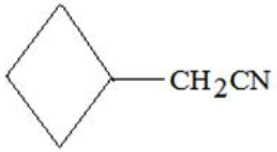
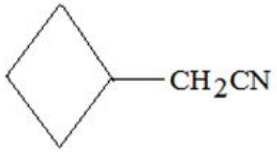
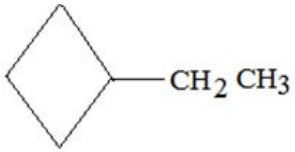
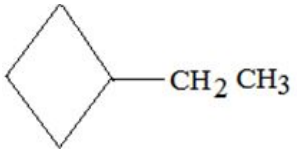
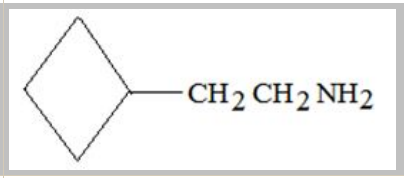
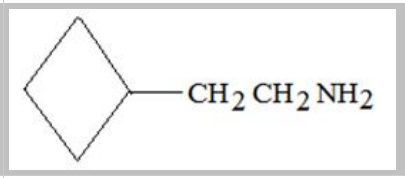
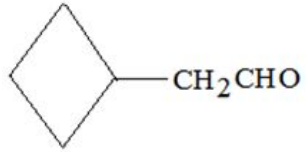
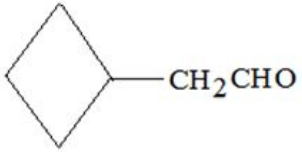
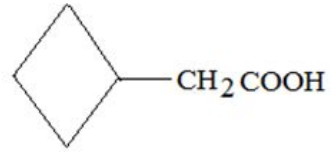
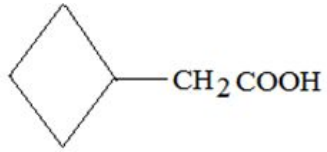
Q.No: 60	Glucose and mannose are related to each other as	ग्लूकोज और मैनोज आपस में सम्बन्धित है ?
A	**Epimers**	**एपिमर के रूप में**
B	**Anommers**	**ऐनोमर के रूप में**
C	**Conformers**	**कॉनफामर के रूप में**
D	**Enantiomers**	**एनेन्टियोमर के रूप में**

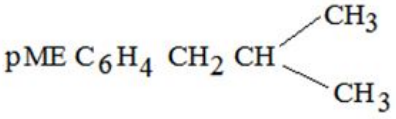
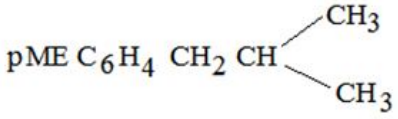
Q.No: 61	How many chiral carbons are there in an open chain 2-Ketohexose such as fructose?	2-कीटो हेक्जोज जैसे कि फ्रक्टोज की विवृत श्रृंखला में कितने काइरल कार्बन होगे ?
A	**2**	**2**
B	**3**	**3**
C	**4**	**4**
D	**None of the these**	**इनमें से कोई नहीं**

Q.No: 62	How many of chiral carbons are in 4-hydroxypyroline whose structure is given below? 	4-हाइड्रासी प्रोलीन में, जिसकी संरचना नीचे दी गयी है, कुल कितने काइरेल कार्बन है ? 
A	**One**	**एक**
B	**Two**	**दो**
C	**Three**	**तीन**
D	**Four**	**चार**

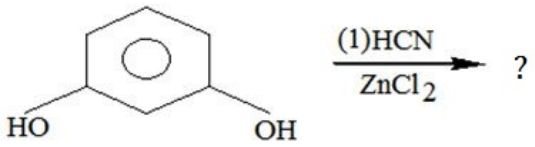
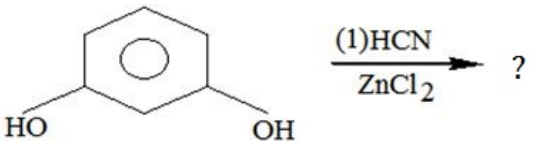
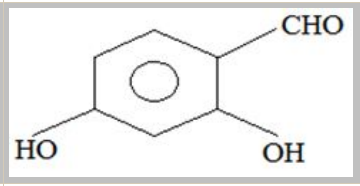
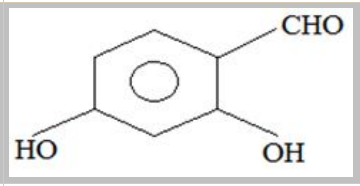
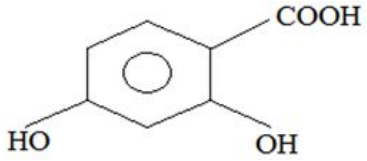
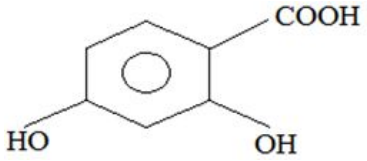
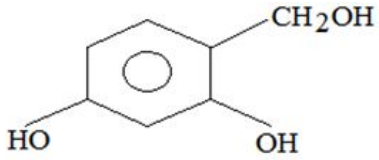
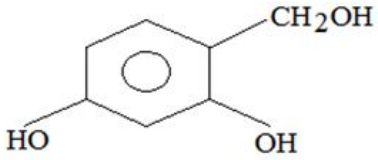
Q.No: 63	Which one will not show any signal in downfield region of ^{1}HNMR?	निम्नलिखित यौगिकों में से कौन ^{1}HNMR में डाऊनफील्ड हिस्से में संकेत नहीं देगा ?
A	**Pyridine**	**पिरीडीन**
B	**Pyrole**	**पाइरॉल**
C	**Piperidine**	**पिपरीडीन**
D	**Furan**	**फ्युरान**

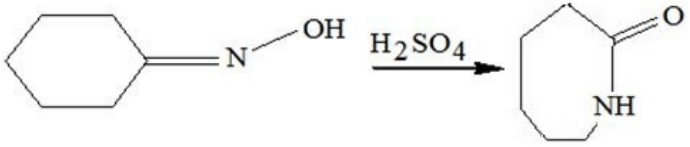
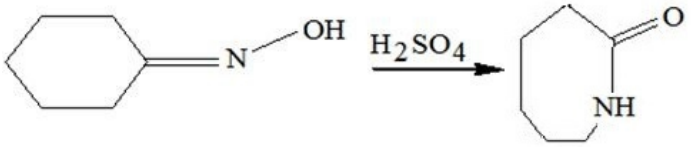
Q.No: 64	The product prepared by the Skraup synthesis with p-Nitroaniline is	p-नाडट्रोएनिलीन को लेकर स्कार्प संश्लेषण से बनने वाला उत्पाद है-
A	**o-methoxy aniline**	**0-मिथाक्सीएनिलीन**
B	**6-Nitroquinoline**	**6-नाइट्रोक्युनोलीन**
C	**8-methoxy quinoline**	**8-मिथाक्सी क्युनोलीन**
D	**Qunoline**	**क्युनोलीन**

Q.No: 65	The product of the reaction of $LiAlH_4$ with  is:	$LiAlH_4$ की  से अभिक्रिया से बनने वाला उत्पाद हैं-
A		
B		
C		
D		

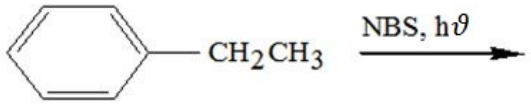
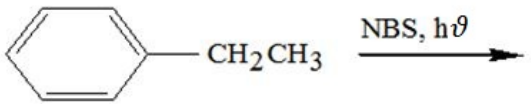
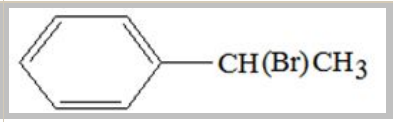
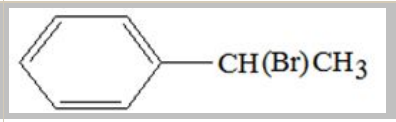
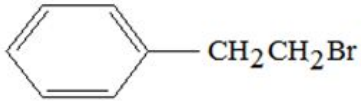
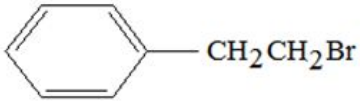
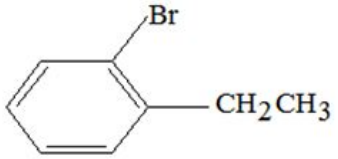
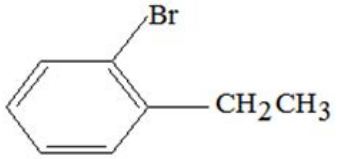
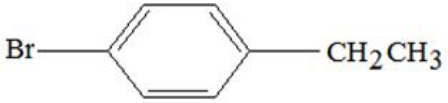
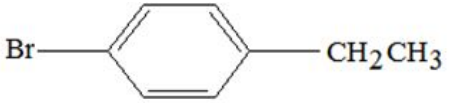
Q.No: 66	The structural formula for a chiral hydrocarbon ($C_{11}H_{16}$), which on oxidation affords terephthalic acid is	एक काइरल हाइड्रोकार्बन ($C_{11}H_{16}$), जो आक्सीकरण के उपरान्त टेरीथैलिक अम्ल देता है, उसका संरचना सूत्र है
A	**P me C_6H_4 CH(CH_3) CH_2 CH_3**	**P me C_6H_4 CH(CH_3) CH_2 CH_3**
B	**P me C_6H_4 CH_2 CH_2 CH_2 CH_3**	**P me C_6H_4 CH_2 CH_2 CH_2 CH_3**
C		
D	**None of these**	**इनमें से कोई नहीं**

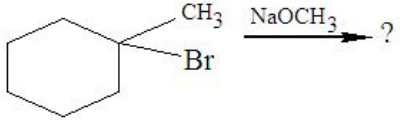
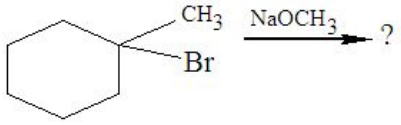
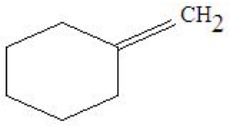
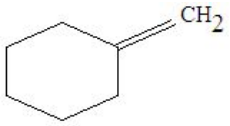
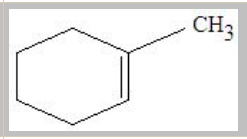
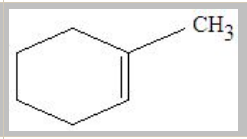
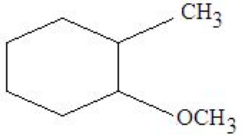
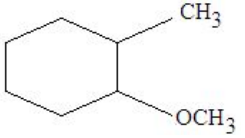
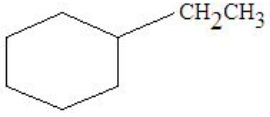
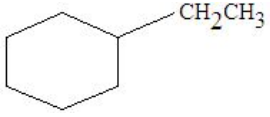
Q.No: 67		

	The product in the following reaction is 	नीचे दी गयी अभिक्रिया का उत्पाद है: 
A		
B		
C		
D	**None of these**	**इनमें से कोई नहीं**

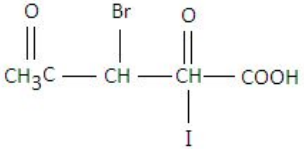
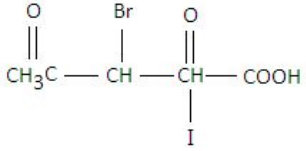
Q.No: 68	The correct name of the following rearrangement reaction is 	निम्नलिखित पुर्नविन्यास अभिक्रिया का सही नाम है- 
A	**Favorski rearrangement**	**फेवस्की पुर्नविन्यास**
B	**Beckmann rearrangement**	**बेकमैन पुर्नविन्यास**
C	**Curtius rearrangement**	**करटियस पुर्नविन्यास**
D	**Schmidt rearrangement**	**स्किमिडट पुर्नविन्यास**

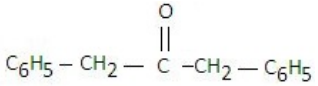
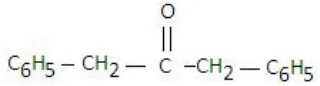
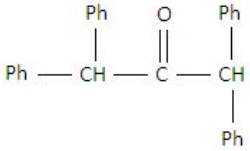
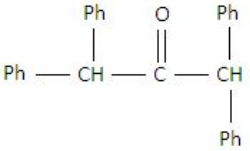
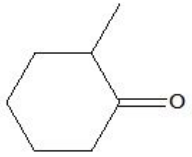
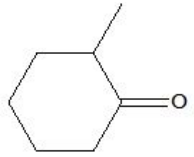
Q.No: 69	Number of ^{13}C NMR signals for 1-phenyl propane are	1-फिनाइल-प्रोपोन में ^{13}C NMR संकेतों की संख्या होगी-
A	**One**	**एक**
B	**Two**	**दो**
C	**Three**	**तीन**
D	**Seven**	**सात**

Q.No: 70	The major product in the following reaction is: 	निम्नलिखित अभिक्रिया का प्रमुख उत्पाद है- 
A		
B		
C		
D		

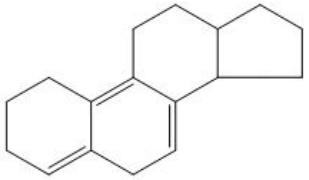
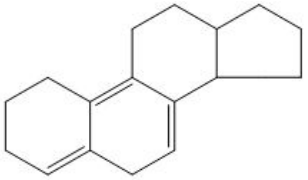
Q.No: 71	The major product in the following reaction is 	निम्नलिखित अभिक्रिया में बनने वाला प्रमुख उत्पाद है- 
A		
B		
C		
D		

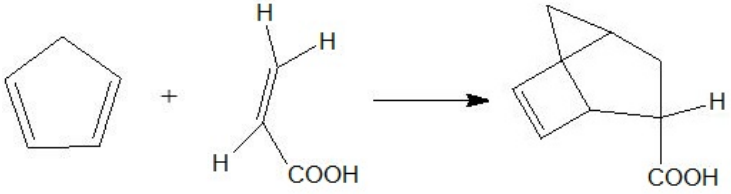
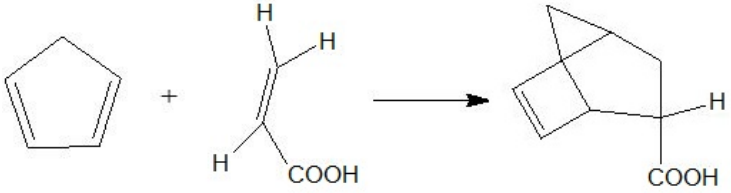
Q.No: 72	Number of different ^1H NMR signals produced by venyl chloride are	विनॉइल क्लोराइड में कितने तरह के ^1H NMR संकेत मिलेगे ?
A	**2**	**2**
B	**3**	**3**
C	**4**	**4**
D	**1**	**1**

Q.No: 73	The IUPAC name of the following compound is 	निम्नलिखित यौगिक का IUPAC नाम है- 
A	**4-keto-3-bromo-2-iodopentanoic acid**	**4-कीटो-3-ब्रोमो-2 आइडो-पेन्टेनोइक अम्ल**
B	**2-Iodo-3-bromo- 4-keto-pentanoic acid**	**2-आइडो-3-ब्रोमो-4कीटो-पेन्टेनोइक अम्ल**
C	**3-bromo- 2-Iodo- 4-keto-pentanoic acid**	**3-ब्रोमो-2-आइडो-4-कीटो-पेन्टेनोइक अम्ल**
D	**4-carboxy-3-bromo-4-iodopentanoic acid**	**4-कार्बोक्सी-3-ब्रोमो-4-आइडो-पेन्टेनोइक अम्ल**
Question Deleted		

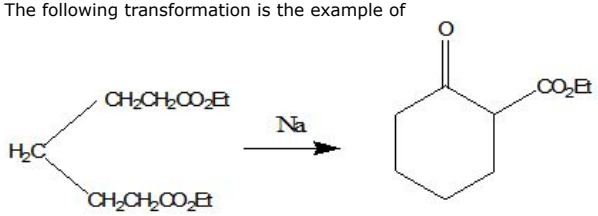
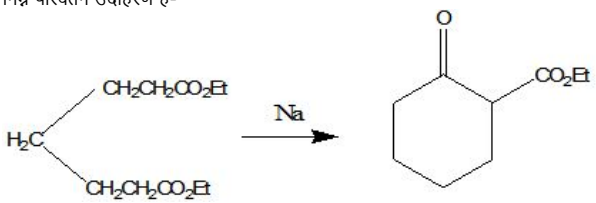
Q.No: 74	Which of the following compounds will undergo decorbonylation on irradiation with UV light?-	निम्नलिखित यौगिकों में से कौन अल्ट्रा वायलेट (पराबैगनी) किरणन द्वारा डीकार्बोनिलेश्न दिखायेगा-
A		
B		
C		
D	**All of these**	**सभी सही है**

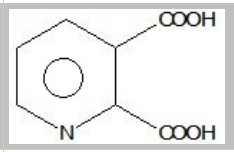
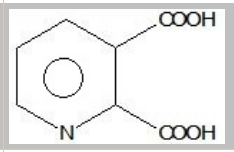
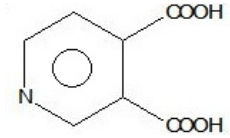
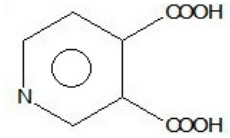
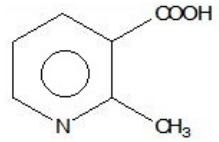
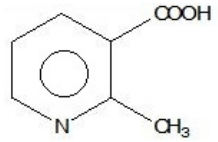
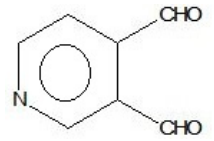
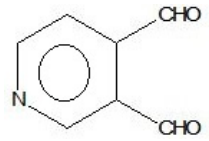
Q.No: 75	The number of exocyclic bonds in the given compound are	नीचे दिए गये यौगिक में एक्जोसाइक्लिक बंधों की संख्या है-

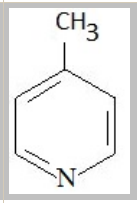
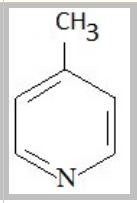
		
A	**One**	**एक**
B	**Three**	**तीन**
C	**Four**	**चार**
D	**Two**	**दो**

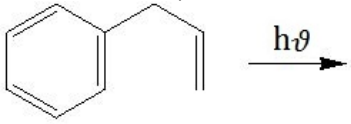
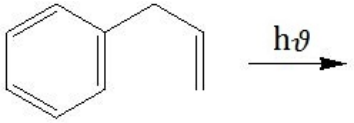
Q.No: 76	The reaction given below is an example of 	नीचे दी गयी अभिक्रिया उदाहरण है- 
A	**Exo addition**	**एक्जो संकलन का**
B	**Endo addition**	**एन्डो संकलन का**
C	**Retro Diel's Alder reaction**	**रिट्रो डायल आल्डर अभिक्रिया का**
D	**Ring inversion**	**रिंग व्युत्क्रमण का**

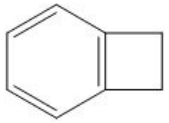
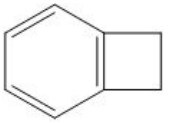
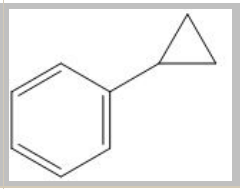
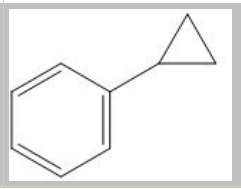
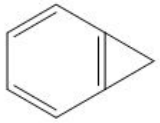
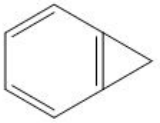
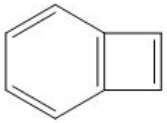
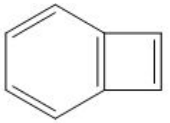
Q.No: 77	In which of the following rearrangements, acylazide is an intermediate?	निम्नलिखित पुर्विन्यास अभिक्रियायों से किसमें ऐसिल एजाडड मध्यस्थ बनता है ?
A	**Hofmann and Curtuis**	**हॉफमैन व करटियस**
B	**Curtisus and Lossen**	**करटियस व लॉजेन**
C	**Lossen and Schmidt**	**लॉजने व स्किमिडट**
D	**Curtuis and Schmidt**	**करटियस व स्किमिडट**

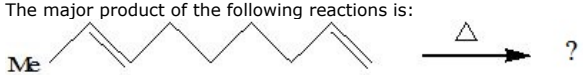
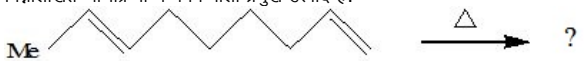
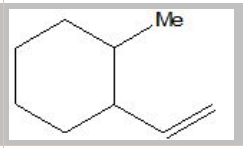
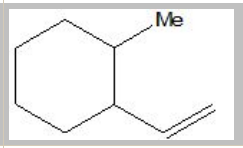
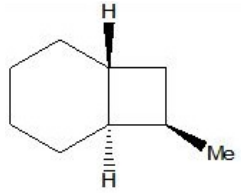
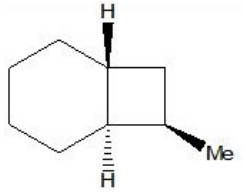
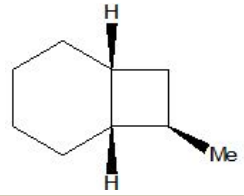
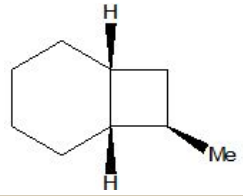
Q.No: 78	The following transformation is the example of 	निम्न परिवर्तन उदाहरण है- 
A	**Diekmann Condensation**	**डिकमैन संघनन का**
B	**Stobbe Condensation**	**स्टौव संघनन का**
C	**Claisen Condensation**	**क्लेजन संघनन का**
D	**Darzen Condensation**	**डारजॅन संघनन का**

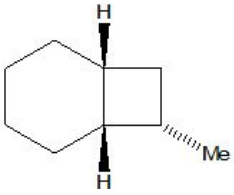
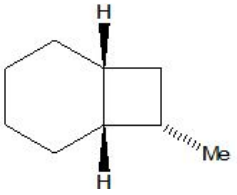
Q.No: 79	Quinoline on oxidation with alkaline $KMno_4$ gives	क्युनोलीन क्षारीय $KMno_4$ से अभिक्रिया कर के देती है:
A		
B		
C		
D		

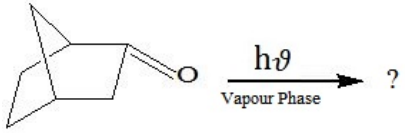
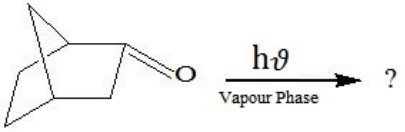
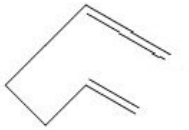
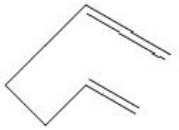
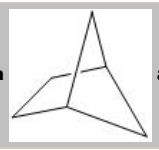
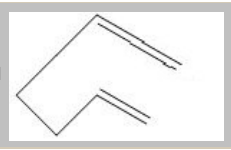
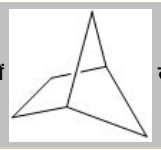
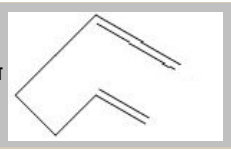
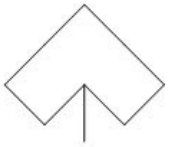
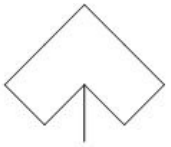
Q.No: 80	Chichibabin reaction is given by	चिचिबाबीन अभिक्रिया देता है:
A	$C_6H_5 — CH_3$	$C_6H_5 — CH_3$
B	$C_6H_5 — NH_2$	$C_6H_5 — NH_2$
C		
D		

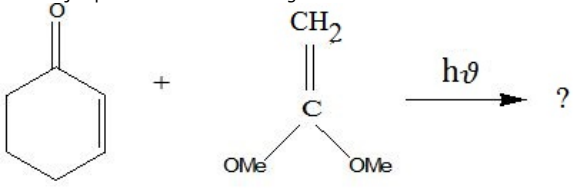
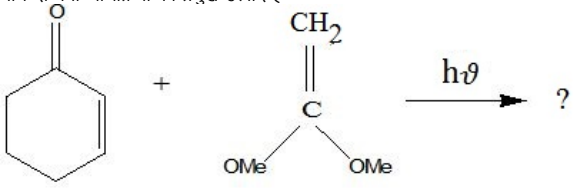
Q.No: 81	The structure of the product in the following reaction is 	निम्नलिखित अभिक्रिया में बनने वाले उत्पाद की संरचन है: 

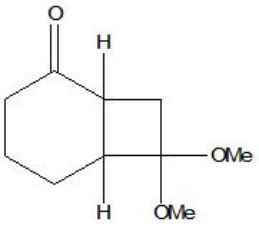
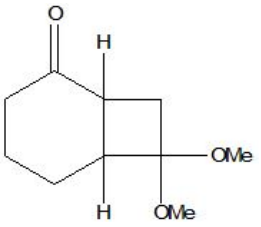
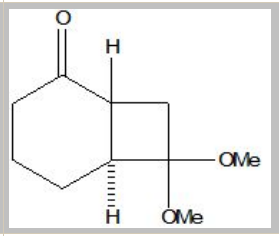
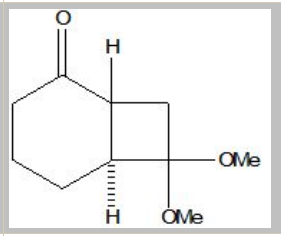
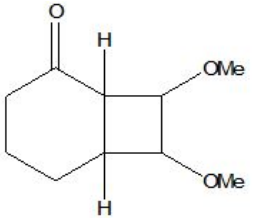
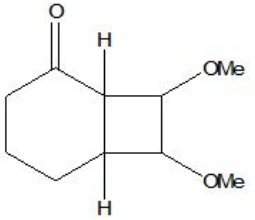
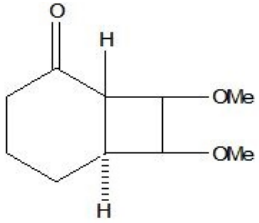
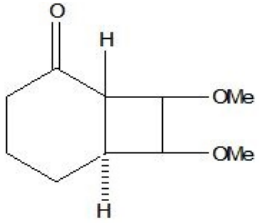
A		
B		
C		
D		

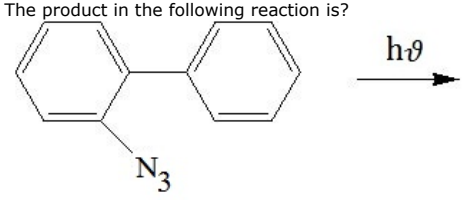
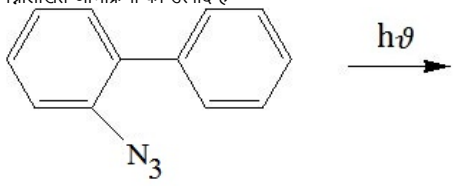
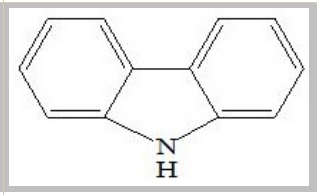
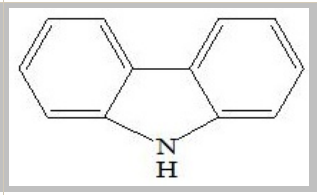
Q.No: 82	The major product of the following reactions is: 	निम्नलिखित अभिक्रिया में बनने वाला प्रमुख उत्पाद है: 
A		
B		
C		
D		

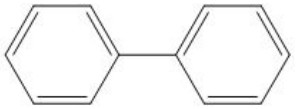
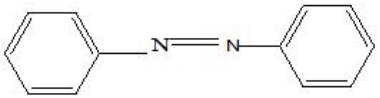
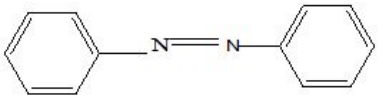
		

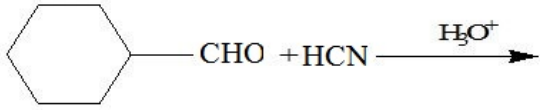
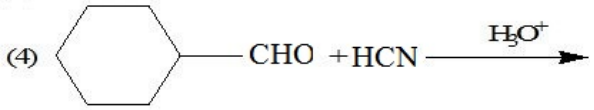
Q.No: 83	Product of the following reaction is – 	नीचे दी गयी अभिक्रिया का उत्पाद है- 
A		
B		
C	**Both**  **and** 	**दोनों**  **तथा** 
D		

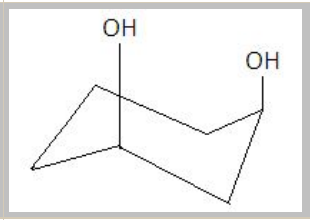
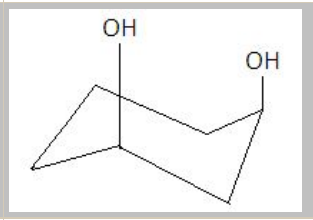
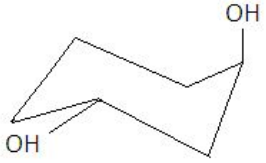
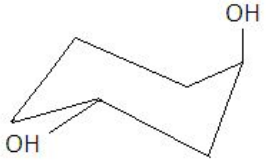
Q.No: 84	The major product in the following reaction is 	नीचे दी गयी अभिक्रिया का प्रमुख उत्पाद है 
A		

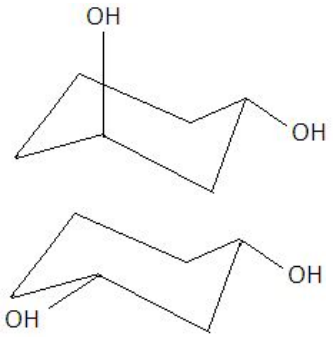
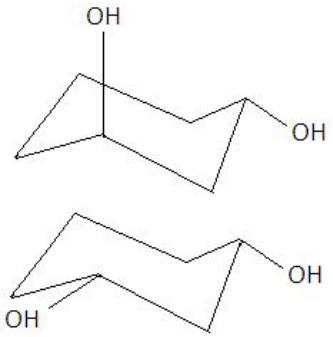
		
B		
C		
D		

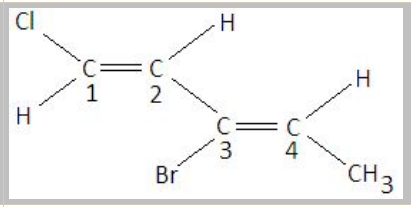
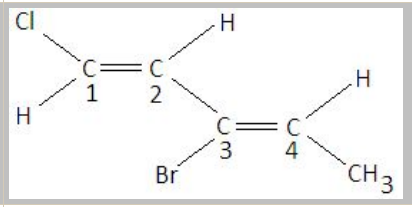
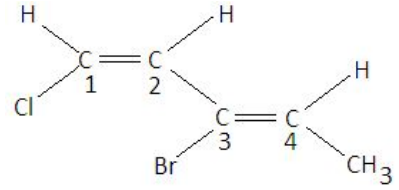
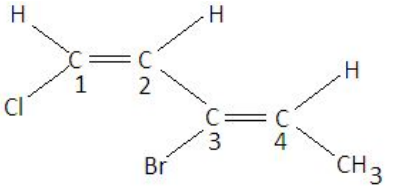
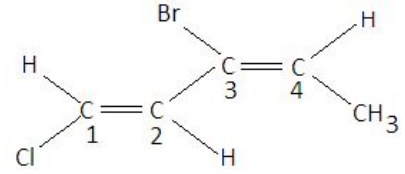
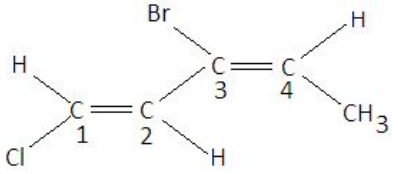
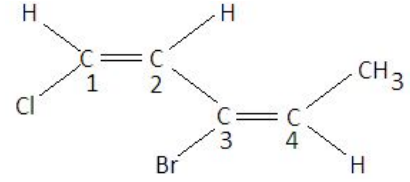
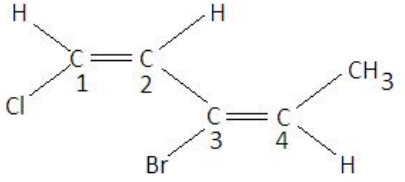
Q.No: 85	The product in the following reaction is? 	निम्नलिखित अभिक्रिया का उत्पाद है- 
A		
B		

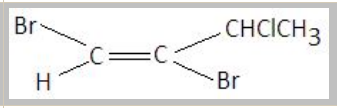
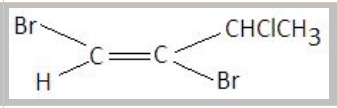
		
C		
D	**None of these**	**इनमें से कोई नहीं**

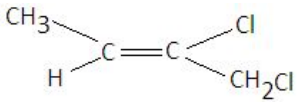
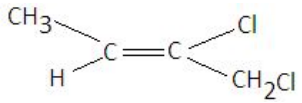
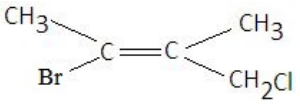
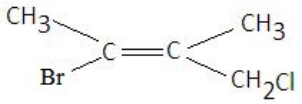
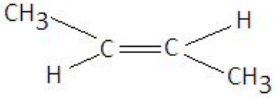
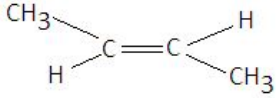
Q.No: 86	In which of the following reactions, chiral carbon is generated (1) $CH_3COCH_3 + HCN \xrightarrow{H_3O^+}$ (2) $CH_3CHO + HCN \xrightarrow{H_3O^+}$ (3) $CH_3COCOOH + HCN \xrightarrow{H_3O^+}$ (4) 	नीचे दी गयी अभिक्रियाओं में कौन सी अभिक्रिया काइरेल कार्बन जनित करती है ? (1) $CH_3COCH_3 + HCN \xrightarrow{H_3O^+}$ (2) $CH_3CHO + HCN \xrightarrow{H_3O^+}$ (3) $CH_3COCOOH + HCN \xrightarrow{H_3O^+}$ (4) 
A	**1,2,3**	**1,2,3**
B	**2,3,4**	**2,3,4**
C	**None**	**कोई नहीं**
D	**2 and 4**	**2 तथा 4**

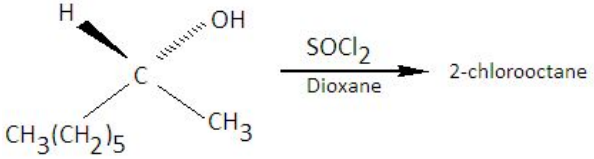
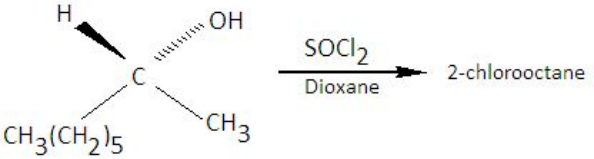
Q.No: 87	The preferred conformation of cis 1,3 dihydroxy cyclohexane is	सिस-1,3 डाइहाइड्रोवसी साइक्लोहेक्जेन का वरीय संरूपण होगा:
A		
B		
C		

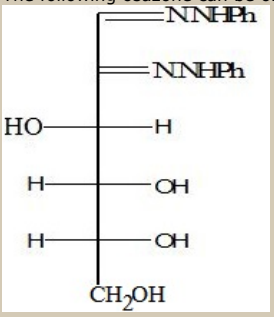
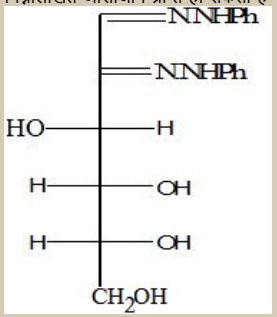
D		

Q.No: 88	Which of the following has 1E, 3Z configuration?	निम्नलिखित में से किसका विन्यास 1E, 3Z है ?
A		
B		
C		
D		

Q.No: 89	Which one of the following will show optical iosomerism?	निम्नलिखित यौगिकों में से कौन प्रकाशीय समवयता दिखाएगा ?
A		

B		
C		
D		

Q.No: 90	Which statement is true about the reaction given below? 	निम्नलिखित अभिक्रिया के लिए कौन सा कथन सत्य है ? 
A	**(1)and (2) both are 'R' isomers**	**दोनो (1) और (2) 'R' समावयवी हैं**
B	**(1)and (2) both are 'S' isomers**	**दोनो (1) और (2) 'S' समावयवी हैं**
C	**(1)is 'R' isomer and (2) 'S' isomer**	**(1) 'R' समावयवी है तथा (2) 'S' समावयवी हैं**
D	**(1)is 'S' isomer and (2) 'R' isomer**	**(1) 'S' समावयवी है तथा (2) 'R' समावयवी हैं**

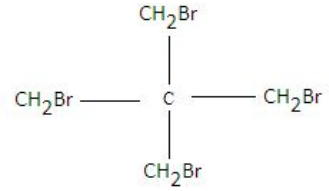
Q.No: 91	The following osazone can be obtained from 	निम्नलिखित ओसाजोन प्राप्त हो सकता है- 
A	**Glucose and Mannose**	**ग्लूकोज और मैनोज से**
B	**Mannose and Galactose**	**मैनोज और ग्लैक्टोज से**
C	**Glucose and Fructose**	**ग्लूकोज और फ्रक्टोज से**
D	**Galactose and Fructose**	**ग्लैक्टोज और फ्रक्टोन से**
Question Deleted		

Q.No: 92	The PMR data of compound (molecular formula $C_5H_8Br_4$)is given below	यौगिक जिसका सूत्र तथा जिसका PMR स्पेक्ट्रम नीचे दिया है $C_5H_8Br_4$ है δ_H 3.6(S, 8H)

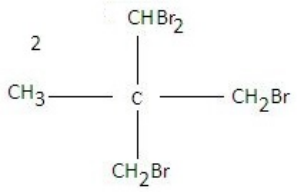
δ_H 3.6(S, 8H)

The structure of the compound will be

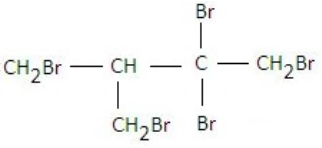
A



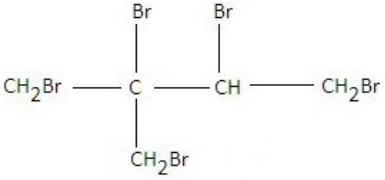
B



C



D



Q.No: 93 Presence of Chloro group in an organic compound can best be known by its

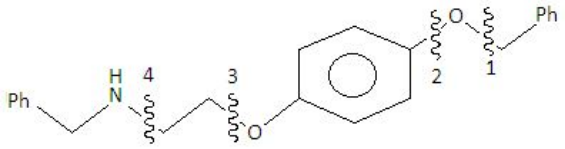
A **UV spectrum**

B **IR spectrum**

C **Mass spectrum**

D **PMR spectrum**

Q.No: 94



Which one of the following disconnections should be done first?

A **1**

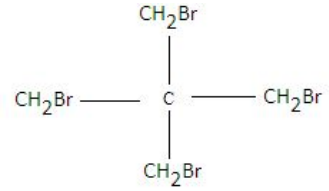
B **2**

C **3**

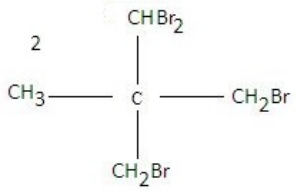
D **4**

उसकी संरचना होगी

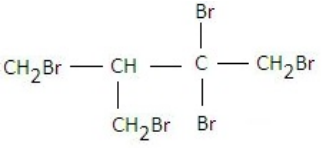
A



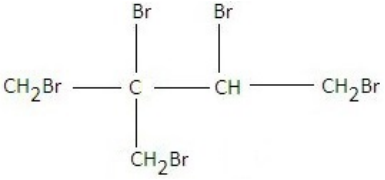
B



C



D



Q.No: 93 किसी कार्बनिक यौगिक में क्लोरो समूह की उपस्थिति जानने का सबसे उपयोगी साधन है:

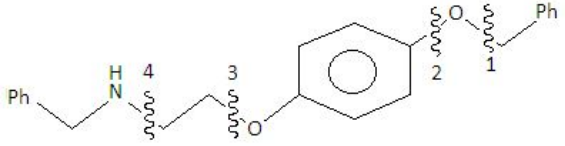
A **पराबैगनी स्पेक्ट्रम**

B **इन्फ्रा रेड स्पेक्ट्रम**

C **मास स्पेक्ट्रम**

D **PMR स्पेक्ट्रम**

Q.No: 94 निम्नलिखित में से किसका अंतरारूपातरण पहले किया जाना चाहिए ?



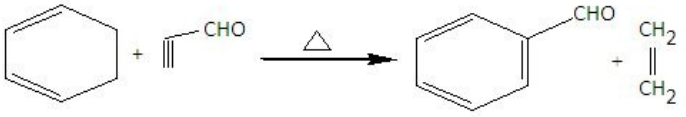
A **1**

B **2**

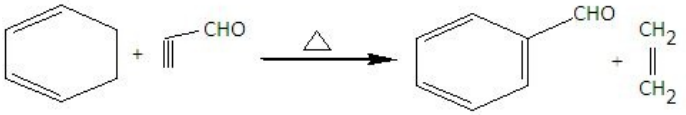
C **3**

D **4**

Q.No: 95 The following reaction is



निम्नलिखित अभिक्रिया है-



A **Diels Alder addition** **डाइल आल्डर युग्मन**

B **Ene reaction** **ईन अभिक्रिया**

C **Retro Diels Alder reaction** **रिटरो डाइल आल्डर अभिक्रिया**

D **Retro Ene reaction** **रिटरो ईन अभिक्रिया**

Q.No: 96 Which one of the following species has unpaired electrons in its bonding π MO orbitals?

निम्नलिखित किस स्पीशीज में वान्डिग π MO कक्षक में अयुग्मित इलेक्ट्रान होता है ?

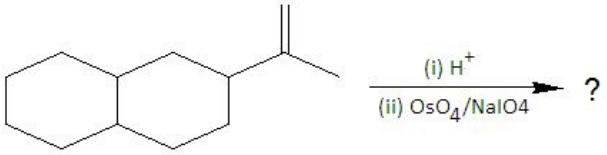
A

B

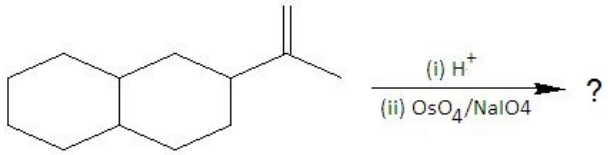
C

D

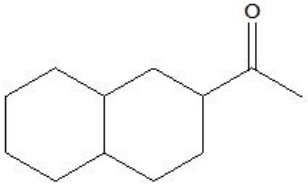
Q.No: 97 The product of the reaction is



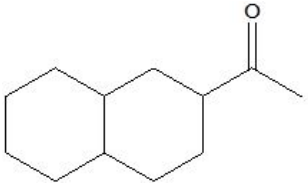
निम्नलिखित अभिक्रिया का उत्पाद है:

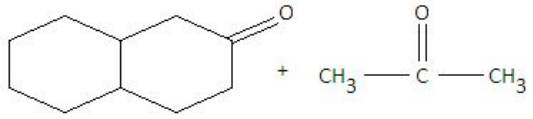


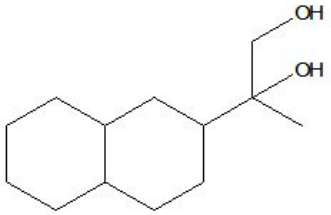
A

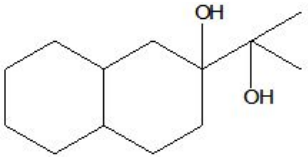


B

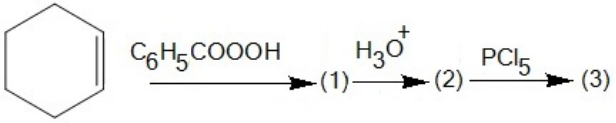




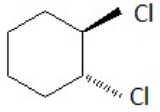
C 

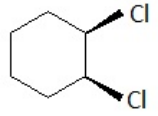
D 

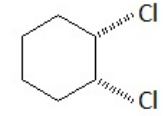
In the given reaction sequence

Q.No: 98 

(3) will be

A 

B 

C 

D **Mixture of all**

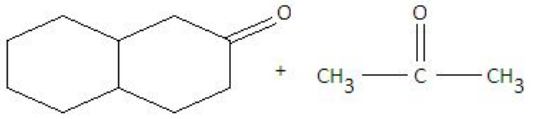
Q.No: 99 Which polysaccharide has α glucoside linkage?

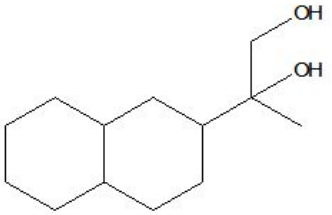
A **Amylose**

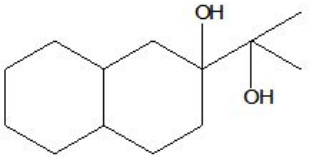
B **Amylopectin**

C **Cellulose**

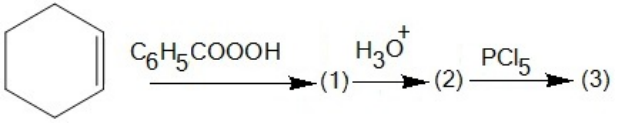
D **All of these**



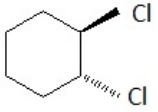


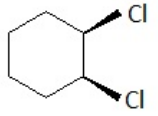


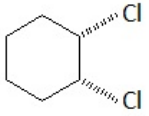
नीचे दिए गये अभिक्रिया क्रम में-



(3) होगा -







सब का मिश्रण

किस बहुशर्करा में एल्फा ग्लाइकोसिडिक वन्ध होता है?

अमाइलोज

अमाइलोपेक्टीन

सैलुलोज

सभी सही है

Question Deleted

Q.No: 100 Which of the following alkaloid contains phenanthrene group?

A **Cinchonine**

B **Papaverine**

C **Cocaine**

D **Morphine**

निम्नलिखित में से किस एल्कालयड में फीनैन्थ्रीन समूह होता है ?

सिनकोनीन

पैपावरीन

कोकेन

माँरफीन

Q.No: 101 Which of the following terepene is provitamin A?

A **Camphor**

B **β-carotene**

C **Squalene**

D **Zingiberene**

निम्न में से कौन सा टरपीन प्रोविटामिन ए है ?

कैम्फर

β-कैरोटीन

स्कालीन

जिन्जिबरीन

Q.No: 102 On fusion with conc KOH quinine gives

A **6-methoxy quinoline + lipidine**

B **Quininic acid**

C **Mero quinine**

D **6-hydroxy quinoline**

क्युनीन सान्द्र KOH के साथ संगलन करने पर देता है ?

6-मीथाक्सी क्युनोलीन + लिपिडीन

क्युनिनिक अम्ल

मिरोक्युनीन

6-हाइड्राक्सीक्युनोलीन

Q.No: 103 Pyridine undergoes nucleophilic substitution with $NaNH_2$ at 100^oC to give

A **3- amino pyridine**

B **2-aminopyridine**

C **3,5-diaminopyridine**

D **2,5-diaminopyridine**

पिरिडीन $NaNH_2$ के साथ 100^oC पर नाभिकस्नेही प्रतिस्थापन द्वारा बनाती है

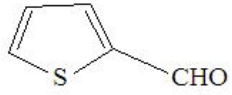
3-अमीनोपिरीडीन

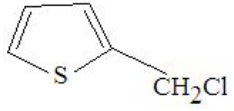
2-अमीनोपिरिडीन

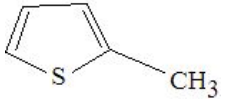
3,5-डाइअमीनोपिरिडीन

2,5-डाइअमीनोपिरिडीन

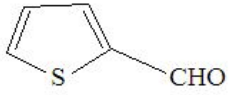
Q.No: 104 Theophene reacts with HCHO in presence of aqueous HCl to give

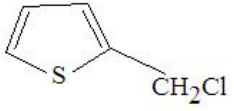
A 

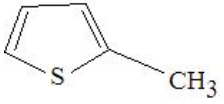
B 

C 

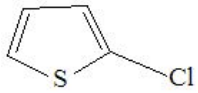
थियोफीन HCHO के साथ जलीय Hcl की उपस्थिति में अभिक्रिया करके बनाता है-

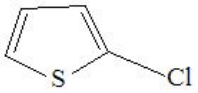




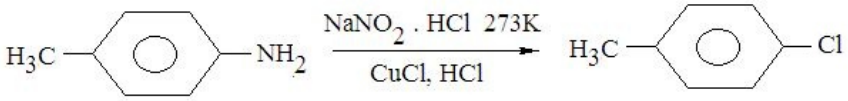


D

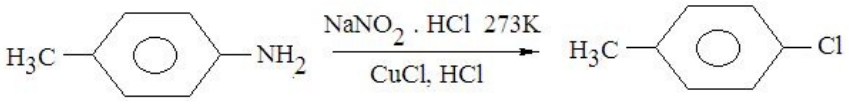




Q.No: 105 The name of the reaction and the intermediate in the following reaction is



निम्नलिखित अभिक्रिया में का नाम व इसमें बनने वाले मध्यवर्ती का नाम है



A **Hunsdiecker and benzyne**

B **Sandmeyer and a free radical**

C **Meerwin and a free radical**

D **Sandmeyer and a Carbanion**

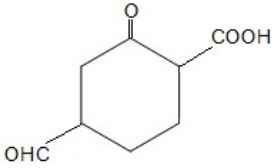
हंसडिकर अभिक्रिया और बेन्जाइन

सैन्डमेयर अभिक्रिया और मुक्त मूलक

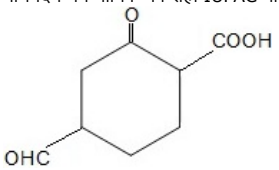
मीरवीन अभिक्रिया और मुक्त मूलक

सैन्डमेयर अभिक्रिया और कार्बेनआयन

Q.No: 106 The correct IUPAC name of the compound



नीचे दिये गये यौगिक का सही IUPAC नाम है-



A **5-Carboxy-3oxycyclohexane carboxyaldehyde**

B **2-Carboxy-5formylcyclohexane**

C **4-formyl-2oxocyclohexane carboxylic acid**

D **4-carboxy-3-oxo cyclohexanal**

5-कार्बोक्सी-3-ऑक्जो साइक्लोहेक्जेन कार्बोक्सएल्डिहाइड

2-कार्बोक्सी-5-फार्मिल साइक्लोहेक्जेन

4-फार्मिला-2-ऑक्जो साइक्लोहेक्जेन कार्बोक्जैलिक एसिड

4-कार्बोक्सी-3-आक्जो साइक्लोहेक्जेनाल

Q.No: 107 The free radical mono bromination of n-butane gives

A **(+)-2-bromobutane**

B **(-)-2-bromobutane**

C **(+) -2-bromobutane**

D **2-bromobutane**

n-ब्युटेन के मुक्त मूलक मोनो ब्रोमीनेशन से बनता है

(+)-2-ब्रोमोब्युटेन

(-)-2-ब्रोमोब्युटेन

(+)-2-ब्रोमोब्युटेन

2-ब्रोमोब्युटेन

Q.No: 108 Reaction intermediate in $E_{IC}B$ reaction is

A **Carbocation**

B **Carbanion**

C **Nitrene**

D **Benzyne**

$E_{IC}B$ अभिक्रिया का मध्यस्थ होता है-

कार्बोकेटायन

कार्बेनआयन

नाइट्रीन

बेन्जाइन

Q.No: 109 Major product of the following reaction is

निम्न अभिक्रिया का प्रमुख उत्पाद होगा ?

$$CH_3CH_2CH_2Br + CH_3O^- \xrightarrow[CH_3OH]{50^oC} ?$$

A **$CH_3CH{=}CH_2$**

B **$CH_3CH_2CH_2OCH_3$**

C **$CH_3CH_2\ CH_3$**

D **$CH_3CH_2\ CH_2OH$**

$$CH_3CH_2CH_2Br + CH_3O^- \xrightarrow[CH_3OH]{50^oC} ?$$

$CH_3CH{=}CH_2$

$CH_3CH_2CH_2OCH_3$

$CH_3CH_2\ CH_3$

$CH_3CH_2\ CH_2OH$

Q.No: 110 Assuming equal concentrations and temperatures, which S_N2 reaction will occur most rapidly?

समान सान्द्रता व ताप पर नीचे दिए गया S_N2 अभिक्रियायों मे से कौन सी अभिक्रिया सबसे तीव्र गति से होगी ?

A $CH_30^{\ominus} + CH3CH2\text{-}F \rightarrow CH3CH2OCH3 + F^{\ominus}$

B $CH_30^{\ominus} + CH3CH2\text{-}I \rightarrow CH3CH2OCH3 + I^{\ominus}$

C $CH_30^{\ominus} + CH3CH2\text{-}Cl \rightarrow CH3CH2OCH3 + Cl^{\ominus}$

D $CH_30^{\ominus} + CH3CH2\text{-}Br \rightarrow CH3CH2OCH3 + Br^{\ominus}$

$CH_30^{\ominus} + CH3CH2\text{-}F \rightarrow CH3CH2OCH3 + F^{\ominus}$

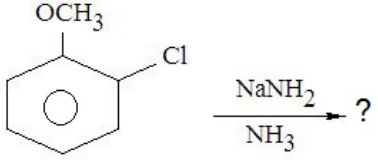
$CH_30^{\ominus} + CH3CH2\text{-}I \rightarrow CH3CH2OCH3 + I^{\ominus}$

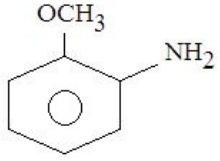
$CH_30^{\ominus} + CH3CH2\text{-}Cl \rightarrow CH3CH2OCH3 + Cl^{\ominus}$

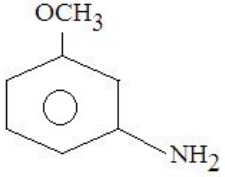
$CH_30^{\ominus} + CH3CH2\text{-}Br \rightarrow CH3CH2OCH3 + Br^{\ominus}$

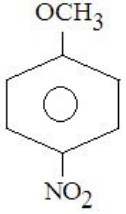
Q.No: 111 What product would you expect from the following reaction?

निम्नलिखित अभिक्रिया का उत्पाद क्या होगा ?

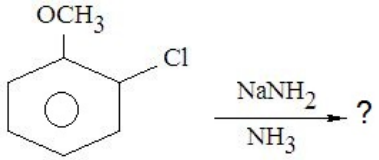


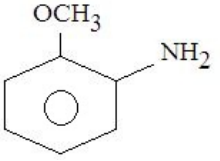
A 

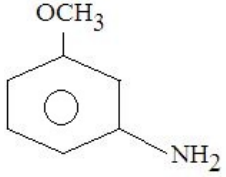
B 

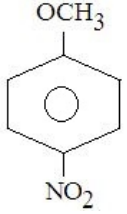
C 

D **All of these**





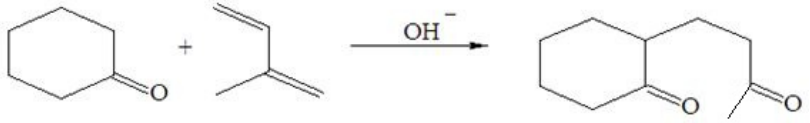




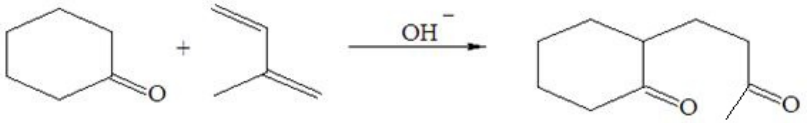
सभी सही है

Q.No: 112

The reaction given below is the example of



नीचे दी गयी अभिक्रिया उदाहरण है



A **Michael Addition**

माइकल युग्मन

B **Hell-Volhard – Zelinsky reaction**

हेल वोल्हार्ड जेलिन्सकी अभिक्रिया

C **Malonic ester systhesis**

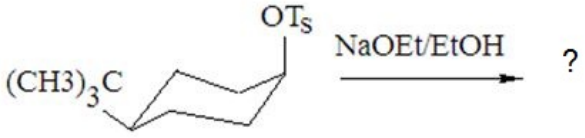
मेलोनिक एस्टर संश्लेषण

D **Aldol Condensation**

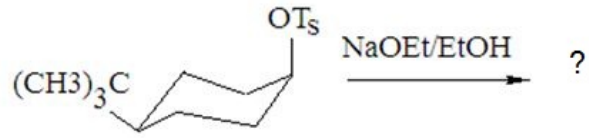
एल्डाल संघनन

Q.No: 113

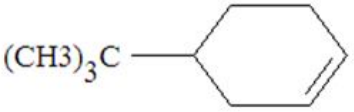
Product in the given reaction will be-

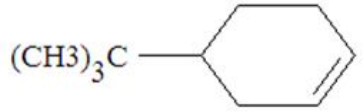


निम्नलिखित अभिक्रिया का उत्पाद होगा -

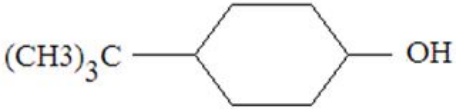


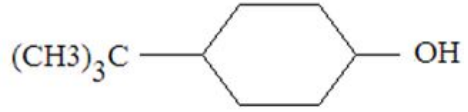
A



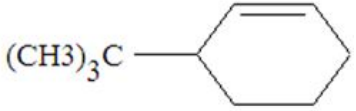


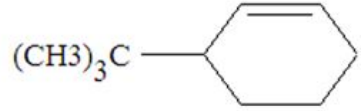
B





C



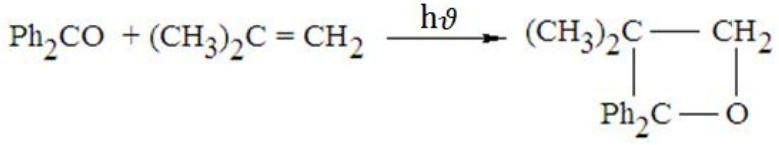


D **Mixture of all of these**

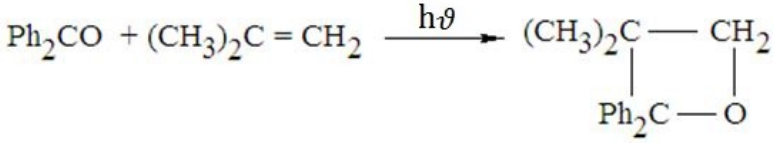
सब का मिश्रण

Q.No: 114

The reaction given below is an example of



नीचे दी गयी अभिक्रिया उदाहरण है-



A **The Paterno Buchi reaction**

पैटरनो बुकी अभिक्रिया का

B **The D_1- π-methane reaarangement reaction**

डाई पाई मीथेन पुनीविन्यास अभिक्रिया का

C **Shapiro reaction**

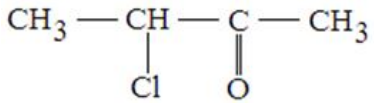
शैपाइरियो अभिक्रिया का

D **None of these**

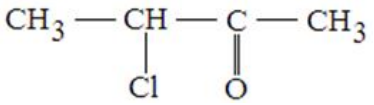
इनमें से कोई नहीं

Q.No: 115

Number of ^{1}HNMR signals in the following compound will be



निम्नलिखित यौगिक के ^{1}HNMR स्पेक्ट्रम में मिलने वाले संकेतो (सिगनलो) की संख्या होगी-



A **2** **2**

B **3** **3**

C **1** **1**

D **4** **4**

Q.No: 116

Using a 60 MHz ^{1}HNMR instrument the chemical shift of a proton was found to be 180 Hz. The chemical shift of this proton at 40 MHz instrument would be

60 MHz के ^{1}HNMR यन्त्र पर एक प्रोटान का केमिकल शिफ्ट 180 Hz है। उसी प्रोटोन का कैमिकल शिफ्ट 40 MHz के यन्त्र पर होगा ?

A **80 Hz** **80 Hz**

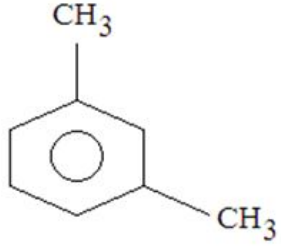
B **120 Hz** **120 Hz**

C **60 Hz** **60 Hz**

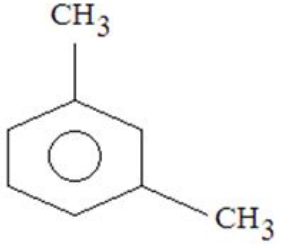
D **240 Hz** **240 Hz**

Q.No: 117

How many signals are expected in ^{13}C NMR spectrum of the following compound



निम्नलिखित यौगिक ^{13}C NMR के कितने संकेत देगा



A **2** **2**

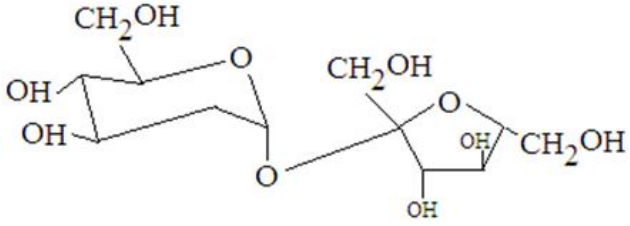
B **3** **3**

C **5** **5**

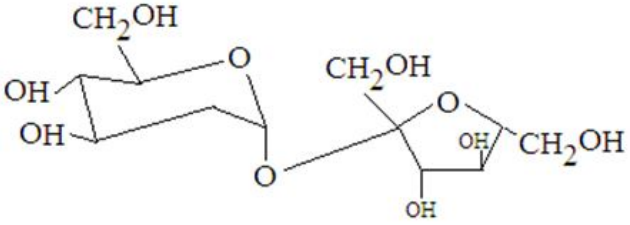
D **4** **4**

Q.No: 118

Shown below is the structural formula of Sucrose (table sugar). How many hemiacetal groups are present in it



नीचे दी गयी संरचना सुक्रोज (शर्करा) की है इसमें कितने हेमीएसिटल समूह है ?



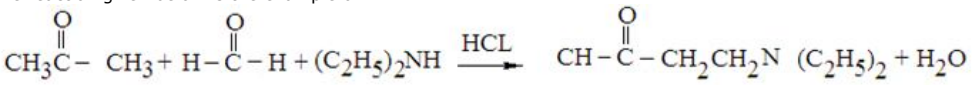
A **One** **एक**

B **Two** **दो**

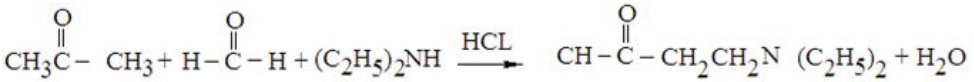
C **Three** **तीन**

D **None** **कोई नहीं**

Q.No: 119 The reaction given below is the example of-



निम्नलिखित अभिक्रिया उदाहरण है-



A **Michael Addition** **माइकल युग्मन**

B **Knoevengel condensation** **नियोवेन्जियल अभिक्रिया**

C **Mannich reaction** **मैनिक अभिक्रिया**

D **Aldol condensation** **एल्डान संघनन**

Q.No: 120 How many tetrahedral stereocentres are present in cholesterol molecule

कोलेस्टेरॉल में कितने टेट्राहेड्रल स्टीरियोसेन्टरस होते है ?

A **One** **एक**

B **Two** **दो**

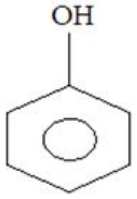
C **Five** **पाँच**

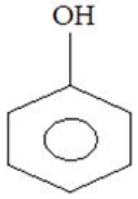
D **Eight** आठ

Q.No: 121 Which of the following compounds would be most reactive towards ring bromination?

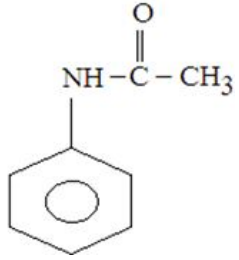
निम्नलिखित यौगिको में से कौनसा यौगिक रिंग ब्रोमोनेशन के लिए सबसे ज्यादा क्रियाशील होगा ?

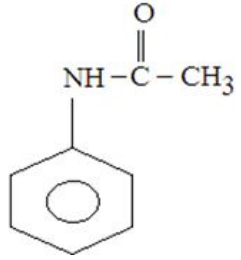
A





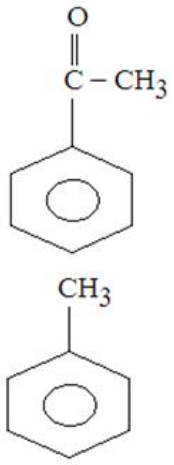
B

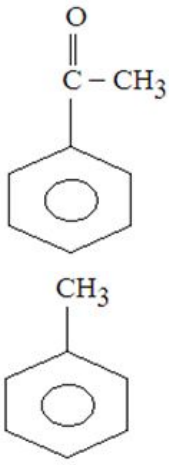




C

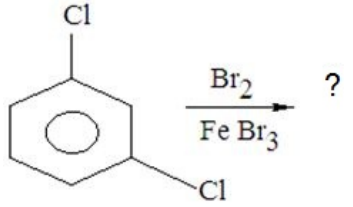
D



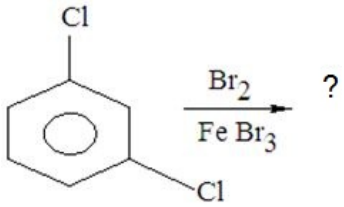


Q.No: 122

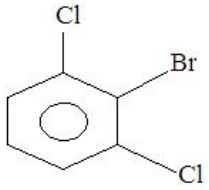
The major product of the following reaction will be –

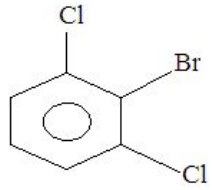


निम्न अभिक्रिया का प्रमुख उत्पाद होगा-

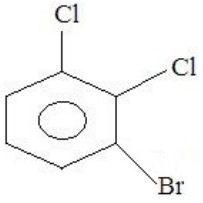


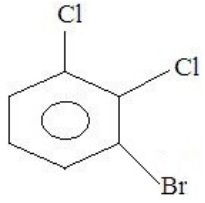
A



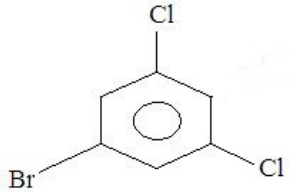


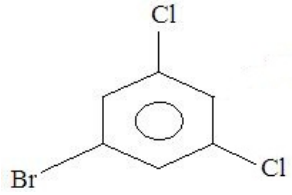
B





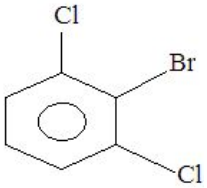
C



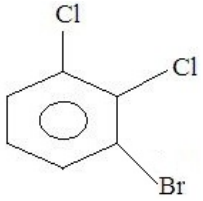


D

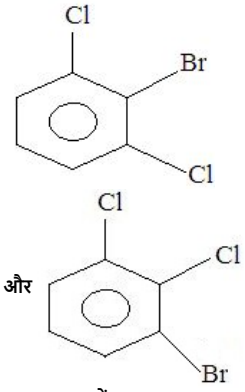
Equal amounts of



and

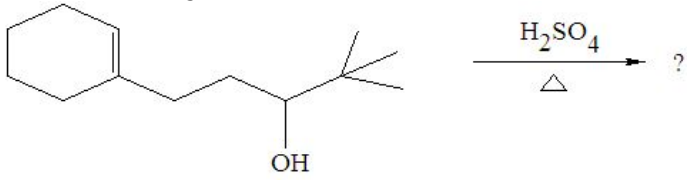


और

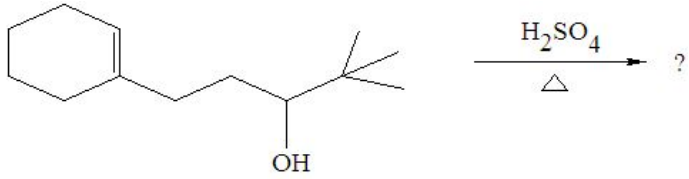


बराबर मात्रा में

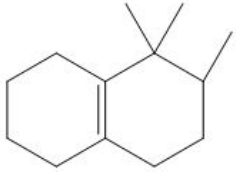
Q.No: 123 Product in the following reaction will be:



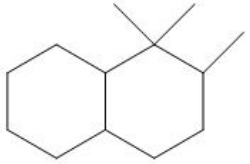
नीचे दी गयी अभिक्रिया का उत्पाद होगा-



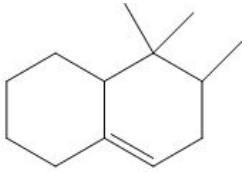
A



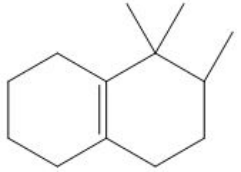
B

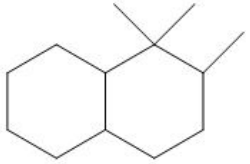


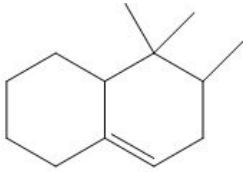
C



D **Reaction will not happen**







अभिक्रिया नहीं होगीं

Q.No: 124 The amino acids are basic units of

अमीनोएसिड बेसिक युनिट है-

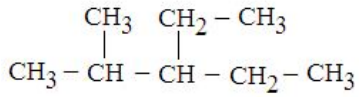
A **Lipid**

लिपिड

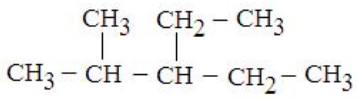
B	**Hormone**	**हारमोन**
C	**Protein**	**प्रोटीन**
D	**Polysaccharide**	**बहुशर्करा**

Q.No: 125

IUPAC name of the following compound is:



निम्नलिखित यौगक का IUPAC नाम है:



A	**2-methyl-3-ethyl pentane**	**2-मिथाइल-3-इथाइल पेन्टेन**
B	**3-ethyl-2-methyl pentane**	**3-इथाइल-2-मिथाइल पेन्टेन**
C	**3-ethyl-4 - methyl pentane**	**3-इथाइल-4-मिथाइल पेन्टेन**
D	**None of these**	**इनमें से कोई नहीं**

Q.No: 126 Which of the following statement is incorrect for carbohydrates?

कार्बोहाइड्रेट के लिए निम्नलिखित कथन में से कौन सा गलत है ?

A	**They are polyhydroxy aldehydes or poly hydroxy ketones**	**वे पोलिडाईड्रोक्सि आल्डिहाईड अथवा पॉलीहाइडाक्सी कीटोन हैं**
B	**Their names generally end in characteristic 'ese'**	**उनके नाम आमतौर पर 'ese' विशेषता में समाप्त होते हैं**
C	**They are composed of carbon, hydrogen and oxygen**	**वे कार्बन इाइड्रोजन और ओक्सीजन से बने होते हैं**
D	**Oligosaccharides and polysaccharides are part of carbohydrates**	**ओलिगोसेकेराइड और पोलीसेकेराइड काबैहाइड्रेट का हिस्सा है**

Q.No: 127 Which of the following statement is correct for D-Sugar?

निम्न में से कौन सा कथन डी-शुगर के लिये सही है ?

A	**-H of the asymmetric carbon farthest from the aldehyde group is written on the right**	**आल्डीहाइड समूह से सबसे दूर के विषम कार्बन के -H को दायें पर लिखा जाता है**
B	**-OH group of the asymmetric carbon farthest from the aldehyde group is written on the right**	**आल्डीहाइड समूह से सबसे दूर के विषम कार्बन के -OH समूह को दायें पर लिखा जाता है**
C	**-H of the asymmetric carbon nearest from the aldehyde group is written on the right**	**एर्ल्डाहाइड समूह से निकटतम असममित कार्बन के -H को दायें पर लिखा जाता है**
D	**-OH group of the asymmetric carbon nearest from the aldehyde group is nearest on the right**	**एर्ल्डाहाइड समूह से निकटतम दूरी के असममित कार्बन के -OH समूह को दायें पर लिखा जाता है**

Q.No: 128 Which of the following statement is correct for the isoelectronic point?

निम्नलिखित में से कौन सा व्यक्तव्य आइसोइलेक्ट्रानिक प्वाइंट के लिये सही है ?

A	**Molecule has no net charge**	**अणु पर कोई परिणामी चार्ज नहीं होता है**
B	**In strong acidic solutions amino acids exists as amino carboxylate ions**	**प्रबल अम्लीय विलयनों में अमीनों अम्ल,एमीनोकार्बाक्सीलेट रूप में मौजूद रहते है**
C	**The pH at which an amino acid exits in its Zwitter ion form is isoelectronic point**	**अमीनो अम्ल जिस pH पर ज्वीटर आयन के रूप में मौजूद रहतें हैं,उसे आइसो इलेक्ट्रानिक प्वाइंट कहते हैं**
D	**Each amino acid has a characteristic isoelectronic point**	**प्रत्येक अमीनो अम्ल का एक विशिष्ट आइसो इलेक्ट्रानिक प्वाइन्ट होता है**

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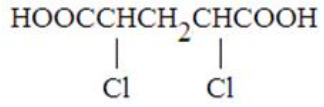
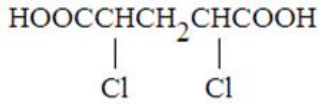
Q.No: 129 Which of the following is α,α-Dichloroglutaric acid?

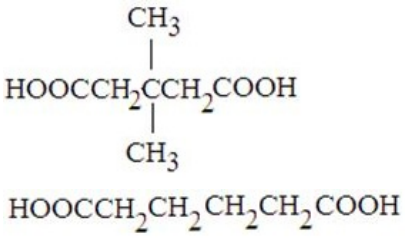
निम्नलिखित में से कौन α,α - डाइक्लोरोग्लूटेरिक अम्ल है?

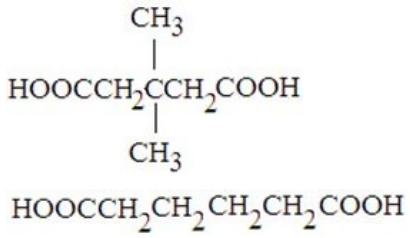
A





B

C 



D **None of these**

इनमें से कोई नहीं

Q.No: 130 Which of the following nucleus is NMR inactive?

निम्नलिखित में से कौनसा केन्द्र (नाभिक) NMR निष्क्रिय है ?

A **$^{16}O_8$**

$^{16}O_8$

B **$^{1}H_1$**

$^{1}H_1$

C **$^{13}C_6$**

$^{13}C_6$

D **$^{31}P_{15}$**

$^{31}P_{15}$

Q.No: 131 In the free radical polymerization, when the termination occurs via disproportionation reaction, what will be the final product(s)?

मुक्त मूलक बहुलीकरण में, जब समाप्ति असंगतण की प्रतिक्रिया के माध्यम से होती है,तो अंतिम उत्पाद क्या होगा ?

A **Only saturated polymers**

केवल संतृप्त बहुलक

B **Only Unsaturated polymers**

केवल असंतृप्त बहुलक

C **Saturated and unsaturated polymers**

संतृप्त और असंतृप्त बहुलक

D **Free radical polymers**

मुक्त मूलक बहुलक

Q.No: 132 Which excitations are far more important in organic photo chemistry?

$(i)\ \sigma \rightarrow \sigma^*$

$(ii) n \rightarrow \sigma^*$

$(iii) \pi \rightarrow \pi^*$

$(iv)\ n \rightarrow \pi^*$

चार संक्रमण आकारों

$(i)\ \sigma \rightarrow \sigma^*$

$(ii) n \rightarrow \sigma^*$

$(iii) \pi \rightarrow \pi^*$

$(iv)\ n \rightarrow \pi^*$

में जो कार्बनिक प्रकाशरसायन में सबसे महत्वपूर्ण है ?

A **(i)&(ii)**

(i)&(ii)

B **(ii)&(iv)**

(ii)&(iv)

C **(i)&(iii)**

(i)&(iii)

D **(iii)&(iv)**

(iii)&(iv)

Q.No: 133 What is Paterno-Buchi reaction?

पैटरनो बुची अभिक्रिया क्या है ?

A **Aldehyde can add to olefins under the influence of UV light to give oxitanes**

UV प्रकाश में एल्डिहाइड ओलीफीने से जुड़कर आक्सीटेन बताता है

B **Ketone can add to saturated compound under the influence of UV light to give oxitanes**

UV प्रकाश में कीटोन संतृप्त यौगिकों से जुड़कर आक्सीटेन देता है

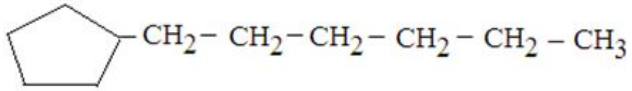
C **Diazoalkanes treated with sulphur to give episulfides**

डाइएजोआलकेन सल्फर के साथ अभिक्रिया कर के ऐपीसल्फाइड देता है

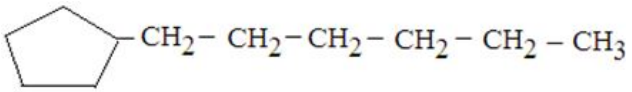
D **Aldehydes, ketones react with ketenes to give β-lactones**

ऑल्डेहाइड व किटोन, कीटीन से अभिक्रिया होने पर β -लेकटोन्स बनता है

Q.No: 134 What is the IUPAC name of the following compound?



निम्नलिखित यौगिक का IUPAC नाम क्या है ?



A **cyclopentylhexane**

B **1- cyclopentylhexane**

C **1- hexylpentane**

D **None of these**

साईक्लोपेन्टाइलहे ज़ेन

1-साईक्लोपेन्टाइलहेक्जेन

1-हेक्जाईलपेन्टेन

इनमें से कोई नहीं

Q.No: 135 In the Jablonski diagram, a molecule present in the S_1 (higher) state can cascade down to S_0 (lower) state and thus return to the ground state. For the above statement, what is wrong from the following?

जब्लोनस्फी आकृति में S_1 (उच्च) स्थिति में मौजूद एक अणु S_0 स्थिति (निम्न स्थिति) में आ सकता है और इस तरह भूमी अवस्थ में वापस लौट सकता है। उपर दिए गए बयान के लिए,निम्नलिखित से क्या गलत है ?

A **This process is slow**

B **The process is known as internal conversion**

C **The amount of energy released is small**

D **Most molecules in S_1 state adopt other pathways**

यह प्रक्रिया धीमी है

इस प्रक्रिया को आंतरिक रूपांतरण के रूप में जाना जाता है

मुक्त होने वाली ऊर्जा की मात्रा कम होती है

अधिकतर अणु S_1 अवस्था में अन्य मार्ग पसंद करते है

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Q.No: 136 Enantiomers are structures that are

एनान्शिओमर्स संरचनाएं है जो

A **Identical but are mirror images of each other**

B **Not identical but are mirror images of each other**

C **Identical but are not mirror images of each other**

D **Not identical and are not mirror images of each other**

समान हैं लेकिन एक दूसरे की दर्पण प्रतिबिंब हैं

समान नहीं हैं लेकिन एक दूसरे की दर्पण प्रतिबिंब हैं

समान हैं लेकिन एक दूसरे की दर्पण प्रतिबिंब नहीं हैं

समान नहीं है और एक दूसरे की दर्पण प्रतिबिंब नहीं हैं

Q.No: 137 Structural are chiral if they _____

संरचनाएं काइरल हैं यदि वे ------|

A **Cannot be super imposed upon their mirror images**

B **Can be super imposed upon their mirror images**

C **Cannot exist as two enantiomers**

D **Possess a plane of symmetry**

अपने दर्पण प्रतिबिंब पर आरोपित नहीं की जा सकती हैं

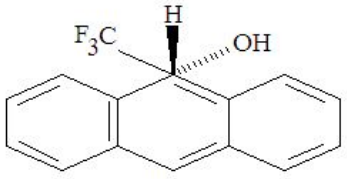
अपने दर्पण प्रतिबिंब पर आरोपित की जा सकती हैं

एनान्शीओर्मस के रूप् में मौजूद नहीं सकते है

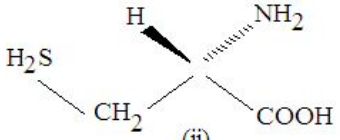
इनमें सममिति तल उपस्थित होता है

Q.No: 138 What will be the respective name of the following two compounds

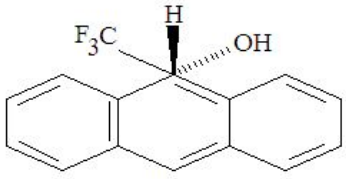
निम्नलिखित दो यौगिकों का संबंधित नाम क्या होगा ?



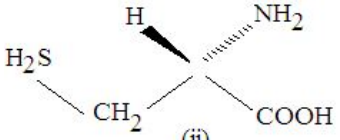
(i)



(ii)



(i)



(ii)

A	**(R)-2,2,2-trifluoro-1(9-anthryl)ethanol & (R) Cysteine**	**(R)-2,2,2-ट्रिफ्लोरो-1(9-ऐन्थ्रील) इथेनोल और (R) सीटस्टेइन**
B	**(S)-2,2,2-trifluoro-1-(9-anthryl)ethenol & (S) cysteine**	**(S)-2,2,2,-ट्रिफ्लोरो-1-(9-ऐन्थ्रील) इथेनोल और (S) सीटस्टेइन**
C	**(R)-2,2,2-trifluoro-1-(9-anthryl)ethenol & (S) cysteine**	**(R)-2,2,2, ट्रिफ्लोरो-1-(9-ऐन्थ्रील) इथेनोल और (S) सीटस्टेइन**
D	**(S)-2,2,2-trifluoro-1-(9-anthryl)ethenol & (R) cysteine**	**(S)-2,2,2 ट्रिफ्लोरो-1-(9-ऐन्थ्रील) इथेनोल और (R) सीटस्टेइन**

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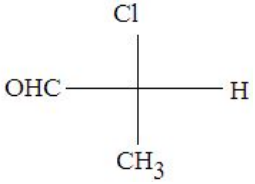
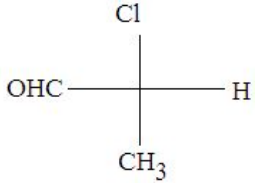
Q.No: 139 For the molecule



Write the priority order of the functional groups present in it.

निम्न अणु में उपस्थित कार्यात्मक समूहों की प्राथमिकता आदेश लिखें



A	**CHO > Cl > CH_3 > H**	**CHO > Cl > CH_3 > H**
B	**Cl > CHO > CH_3 > H**	**Cl > CHO > CH_3 > H**
C	**CHO < Cl < CH_3 < H**	**CHO < Cl < CH_3 < H**
D	**Cl < CHO < CH_3 < H**	**Cl < CHO < CH_3 < H**

Q.No: 140 Which statement is correct for the molecule trans-But-2-enedionic acid?

कौन सा कथन ट्रान्स-ब्यूट-2-एणेडाओनीक अम्ल के लिए सही है

A	**Both –COOH groups are high priority groups**	**दोनो –COOH समूह उच्च प्राथमिकता वाले समूह है**
B	**Both –H groups are lower priority groups**	**दोनो -H समूह कम प्राथमिकता वाले समूह है**
C	**It is having E-configuration**	**इसका E-विन्यास है**
D	**All of these**	**सभी सही है**

Q.No: 141 What is stereo mutation ?

त्रिविम-म्यूटेशन क्या है ?

A	**Conversion of cis-isomers to trans-isomers**	**सिस-समावयवी द्रान्स-आइसोंमर में रूपांतरण**
B	**Conversion of trans-isomers to cis-isomers**	**द्रान्स-आइसोंमर का सिस-समावयवी में रूपांतरण**
C	**Both (Conversion of cis-isomers to trans-isomers**	**(सिस-समावयवी द्रान्स-आइसोंमर में रूपांतरण) और (द्रान्स-आइसोंमर का सिस-समावयवी में रूपांतरण) दोनों**

) and (Conversion of trans-isomers to cis-isomers)

D **None of these** **इनमें से कोई नहीं**

Q.No: 142 Which confirmation of cyclohexane will be having highest energy? निम्न में से साइक्लोहेक्सेन की किस रचना में उच्चतम ऊर्जा होगी ?

A **Chair** **कुर्सी**

B **Half chair** **आधी कुर्सी**

C **Boat** **नाव**

D **Twist boat** **ट्वस्ट नाव**

Q.No: 143 What is wrong with methyl cyclo hexane? मीधाइल साइक्लोहेक्सेन के लिए क्या गलत है

A **Axial – methyl cyclo hexane has more steric effect** **अक्षीय मिथायल सायक्लोहेक्सेन का स्टिरिक प्रभाव अधिक है**

B **The equatorial and axial conformers exists in equilibrium** **समतीलय और अक्षीय अनुनाद समरूपता में मौजूद है**

C **Hydrogen bond repulsion occurs due to steric crowding of methyl group and two hydrogens** **डाइड्रोजन बंधन थ्रलिकर्षण (अपकर्षण) मिथाइल ग्रुप और दो इाइड्रोजेंस के कारण होता है**

D **Equatorial – methyl cyclo hexane has less steric effect** **इक्विटोरीयल मिथायल सायकलोहेक्सेन में कम अवकाशीय प्रभाव होता है**

Q.No: 144 Which statement is not correct for NMR spectra? इन में से कौन सा बयान NMR स्पेक्ट्रा के लिए सही नहीं हैं?

A **The twelve protons in TMS are equivalent and are highly shielded** **TMS में बारह प्रोटान समकक्ष है और वे अत्यधिक परिरक्षित है**

B **Difference in the magnetic field , strength between a bare proton and a proton in a molecule is known as chemical shift** **एक अकेले प्रोटान और अणु में एक प्रोटान के बीच चुंबकीय क्षेत्र की ताकत में अंतर को रासायनिक स्थान फेर के रूप में जाना जाता है**

C **The peaks for the protons in any organic molecule appear upfield with respect to protons of TMS** **किसी भी कार्बनिक अणु में प्रोटान TMS के प्रीटानो के शिखर सामेक्ष में अपफील्ड में दिखाई देता है**

D **For TMS, δ=0** **TMS के लिए, δ=0**

Q.No: 145 What are Isotactic polymers? आइसोर्टोक्टक बहुलक क्या है

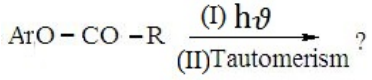
A **The configuration of stereocentre alternates** **अवकाशीय केन्द्र का विन्यास बदलता है**

B **The stereocentres have random configuration** **अवकशीय केन्द्र का विन्यास है क्रमरहित है**

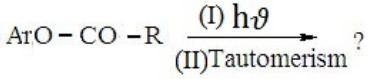
C **All the stereocentres in the chain have same configuration** **श्रृंखला में सभी अवकाशीय केन्द्र का एक ही विन्यास है**

D **None of these** **इनमें से कोई नहीं**

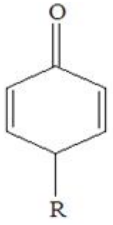
Q.No: 146 Complete the reaction

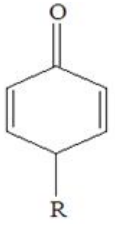


अभिक्रिया को पूर्ण करें:



A





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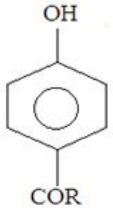

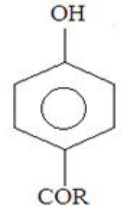

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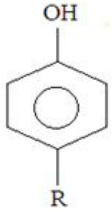
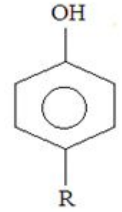
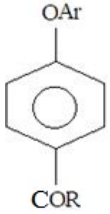
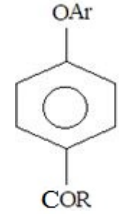




D

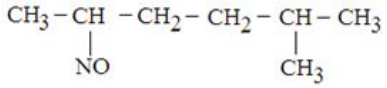


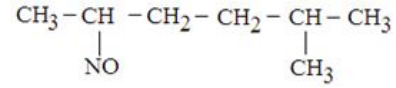


Q.No: 147 Write the structural formula for 2-Methyl-5-nitrosohexane

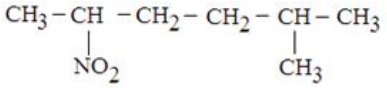
2-Methyl-5-nitrosohexane का संरचनात्मक सूत्र लिखें

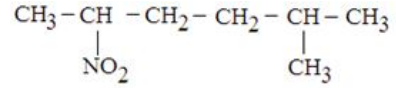
A



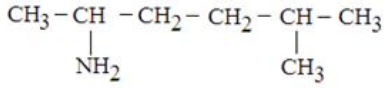


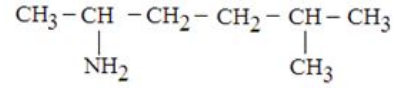
B



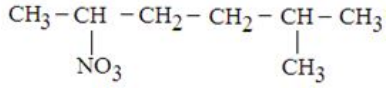


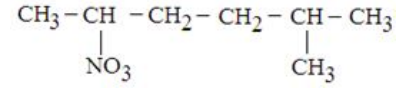
C





D





Q.No: 148 What are the starting materials for the synthesis of nylon 66?

नायलोन 66 के संश्लेषण के शुरूआती सामग्री क्या है ?

A **$HOOC-(CH_2)_6-COOH + HO-CH_2-CH_2-OH$**

$HOOC-(CH_2)_6-COOH + HO-CH_2-CH_2-OH$

B **$HOOC-(CH_2)_4-COOH + HO-CH_2-CH_2-OH$**

$HOOC-(CH_2)_4-COOH + HO-CH_2-CH_2-OH$

C **$HOOC-(CH_2)_6-COOH + H_2N-(CH_2)_6-NH_2$**

$HOOC-(CH_2)_6-COOH + H_2N-(CH_2)_6-NH_2$

D **$HOOC-(CH_2)_4-COOH + H_2N-(CH_2)_6-NH_2$**

$HOOC-(CH_2)_4-COOH + H_2N-(CH_2)_6-NH_2$

Q.No: 149 What is the correct stability order of the carbanion if the following functional groups are present on α position?

यदि निम्नलिखित कार्यशील समूहों α स्थान पर उपस्थित है तो कार्बेनायत का सहीं स्थिरता क्रम क्या है ?

A **NO_2 > RCO > COOR > SO_2 > CN** **NO_2 > RCO > COOR > SO_2 > CN**

B **NO_2 < RCO < COOR < SO_2 < CN** **NO_2 < RCO < COOR < SO_2 < CN**

C **NO_2 > COOR > SO_2 > RCO > CN** **NO_2 > COOR > SO_2 > RCO > CN**

D **NO_2 < COOR < SO_2 < RCO < CN** **NO_2 < COOR < SO_2 < RCO < CN**

Q.No: 150 Which statement is wrong for free radical?

इनमें से कौनसा कथन मुक्त मूलक के लिए गलत है ?

A **A net magnetic moment is there** **परिणामी चुंबकीय आधूर्ण है**

B **They may contain more than one unpaired electrons** **इसमें एक के अधिक अयुग्मित इलेक्ट्रोन हो सकते है**

C **The species is paramagnetic** **ये जाति अनुचुंबकिय है**

D **Their lifetimes are extremely long in solution** **नका जीवनकाल द्रावण में बहुत लंबा होता है**

Q.No: 151 What is wrong for nitrenes?

नाइट्रोन्स के लिए क्या गलत है?

A **Nitrenes are reactive** **नाइट्रोन्स क्रियाशील होते है**

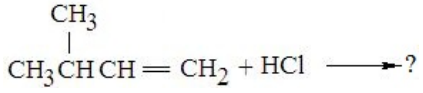
B **They exist in both triplet and singlet states** **वे दोनों ट्रिपलेटस् और सींग्लेट स्थिलि में मौजूद होते है**

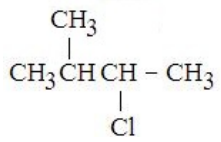
C **Aryl nitrenes are more reactive than alkyl nitrenes** **ओराइल नाइट्रेन्स आल्काइल नाइट्रेन्स से ज्यादा क्रियाशील है**

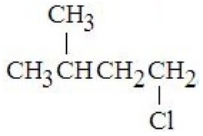
D **They resembles carbenes** **ये कार्बिन के समान है**

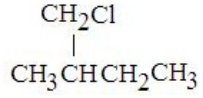
Q.No: 152 What will be the major product (p) for the following reaction?

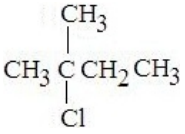
निम्नलिखित अभिक्रिया का मुख्य उत्पाद क्या होगा ?

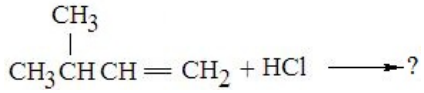


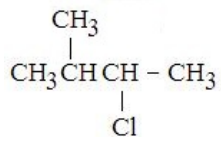
A 

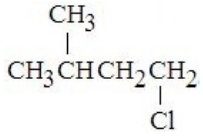
B 

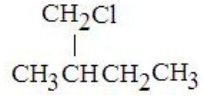
C 

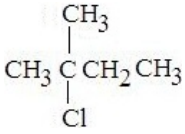
D 



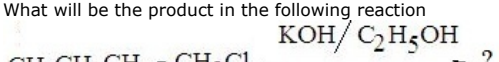




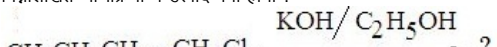


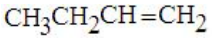


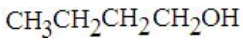
Q.No: 153 What will be the product in the following reaction

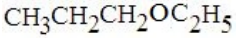


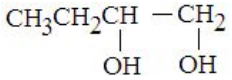
निम्नलिखित अभिक्रिया में उत्पाद क्या होगा ?



A 

B 

C 

D 

Q.No: 154 What will be the % of the product Nitrotolune (ortho, meta or para) in the decreasing order for the nitration of Tolune?

टाल्यूइन के नाइट्रीकरण में उत्पाद नाइट्रोटोल्यून (ओपौ,मेटा या पेरा) का घटते क्रम में प्रतिशत क्या होगा ?

A **meta - para - ortho** **मेटा-पेरा-ओथौ**

B **meta - ortho - para** **मेटा-ओथौ-पेरा**

C **ortho - meta - para** **ओथौ-मेटा-पेरा**

D **None of these** **इनमें से कोई नहीं**

Q.No: 155 What is the correct order of aromaticity for the following compounds
[Benzene, Furan , Thiophene and Pyrrole]

निम्न योगिकों के लिए अरोमेटिसिटी का सही क्रम क्या है?
[बेंजीन, फ्युरान, थायोफीन और पाइरोल]

A **benzene > furan > thiophene > pyrrole** **बेंजीन,फ्युरान,थायोफीन,पाइरोल**

B **benzene > thiophene > pyrrole > furan** **बेंजीन,थायोफीन,फ्युरान,पाइरोल**

C **benzene > thiophene > furan > pyrrole** **बेंजीन,थायोफीन,पाइरोल,फ्यूरान**

D **benzene > furan > pyrrole > thiophene** **बेंजीन,फ्यूरान,पाइरोल,थायोफीन**

Question Deleted

Q.No: 156 What will be the name of the product in which pyridine is heated with sodamide?

उत्पाद का क्या नाम होगा जिसमें पिरीडिन को सोड़ामाइड के साथ गरम किया जाता है ?

A **2,4,6-Triaminopyridine** **2,4,6-ट्राईएमोनोपिरिडीन**

B **4-aminopyridine** **4-एमीनोपिरिडीन**

C **3-aminopyridine** **3-एमिनो पिरीडीन**

D **2-aminopyridine** **2-एमिनो पिरीडीन**

Q.No: 157 Which catalyst and co-catalyst are repectively generally used in the cationic polymerization?

कौनसे उत्प्रेरक और सह उत्प्रेरक क्रमश: सामान्यत: घनआयोनिक बहुलीकरक में उपयोग किये जाते हैं ?

A **BF_3 and H_2O** **BF_3 and H_2O**

B **BF_3 and LiR** **BF_3 and LiR**

C **LiR and H_2O** **LiR and H_2O**

D **H_2O and LiR** **H_2O and LiR**

Q.No: 158 What is the order of stability among simple alkyl carbocations?

A **tertiary > secondary ≅ primary**

B **tertiary < secondary ≅ primary**

C **tertiary ≅ secondary < primary**

D **tertiary > secondary > primary**

सामान्य आल्काइल कार्बघनायन के बीच स्थिरता का क्रम क्या है ?

तृतीयक > द्वितीयक ≅ प्राथमिक

तृतीयक < द्वितीयक ≅ प्राथमिक

तृतीयक ≅ द्वितीयक < प्राथमिक

तृतीयक > द्वितीयक > प्राथमिक

Q.No: 159 What will be the product for the reaction of D-Glucose with

$$\xrightarrow[\text{(ii) } CaCO_3]{\text{(i) } Br_2 \text{ water}} ?$$

(iii) H_2O, Fe^{2+}

A **D-Mannose**

B **L-Mannose**

C **D-Arabinose**

D **L-Arabinose**

डी ग्लूकोज जब निम्न से क्रिया करता है तो क्या उत्पाद होगा ?

$$\xrightarrow[\text{(ii) } CaCO_3]{\text{(i) } Br_2 \text{ water}} ?$$

(iii) H_2O, Fe^{2+}

D-मैनोस

L-मैनोस

D-अरेबिनोस

L-अरेबिनोस

Q.No: 160 Which absorption requires maximum energy in the electronic transition?

A **$n \rightarrow \pi^*$**

B **$\pi \rightarrow \sigma^*$**

C **$n \rightarrow \sigma^*$**

D **$\sigma \rightarrow \sigma^*$**

किस अपशोषण के लिए इलेक्ट्रानिक संक्रमण में अधिकतम ऊर्जा की आवश्यकता होती है ?

$n \rightarrow \pi^*$

$\pi \rightarrow \sigma^*$

$n \rightarrow \sigma^*$

$\sigma \rightarrow \sigma^*$

Q.No: 161 Give the splitting pattern of the signal for the hydrogens in the PMR spectra of Butane-2-One

A **Singlet, triplet and triplet**

B **Singlet, quartet and triplet**

C **Singlet, singlet and singlet**

D **Singlet, doublet and triplet**

ब्युटने-2-वन के PMR सोक्ट्रा में इाइट्रोजन के लिए संकेतो के विभाजन पैटर्न(तरीका) को दें ?

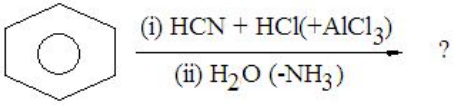
सिंगलेट,ट्रीयमेट और ट्रीप्लेट

सिंगलेट,क्वारटेट और ट्रीप्लेट

सिंगलेट,सिंगलेट और सिंगलेट

सिंगलेट,डब्लेट और ट्रीप्लेट

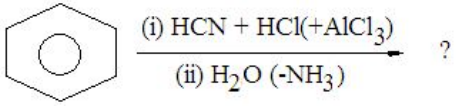
Q.No: 162 Complete the following reaction



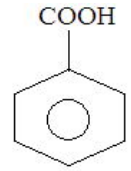
$$\xrightarrow[\text{(ii) } H_2O \text{ (-}NH_3\text{)}]{\text{(i) HCN + HCl(+}AlCl_3\text{)}} ?$$

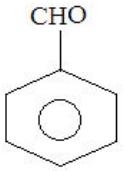
A

निम्नलिखित अभिक्रिया को पूरा करें।

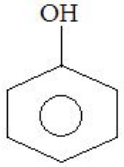


$$\xrightarrow[\text{(ii) } H_2O \text{ (-}NH_3\text{)}]{\text{(i) HCN + HCl(+}AlCl_3\text{)}} ?$$

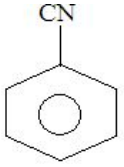




B



C



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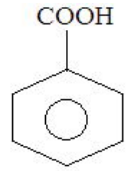
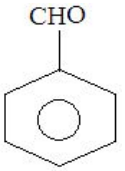
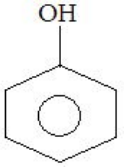
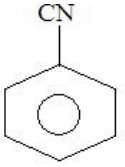








Q.No: 163 What will be the product when benzene is reacted with acetyl chloride in the presence of aluminum chloride?

एल्युमीनियम क्लोराइड की उपस्थिति में एसिटाइल क्लोराइड के साथ बेंजीन की अभिक्रिया करने पर उत्पाद क्या होगा ?

A **Benzophenone**

बेन्जोफेनोन

B **Acetophenone**

एसेटोफेनोन

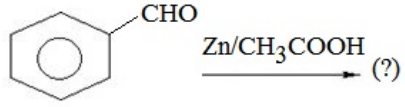
C **Benzaldehyde**

बेन्ज़ाल्इिहारड

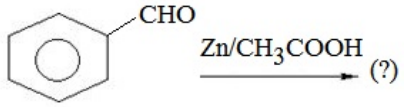
D **Benzyl chloride**

बेन्ज़ाइल क्लोराइड

Q.No: 164 What will be the product in the following reaction?



निम्नलिखित अभिक्रिया में उत्पाद क्या होगा ?



A **1,2-Diphenylethane-1,2-diol**

1,2-डाइफिनाइत्मइथेन-1,2-डायोल

B **1,2-Diphenylethane-1,1-diol**

1,2-डाइफिनाइत्मइथेन-1,1-डायोल

C **Benzopinacol**

बेन्जोपीनाकोल

D **Bezylalcohol**

बेन्जाइल आल्कोइोल

Q.No: 165 Select the starting material given below goes Claisen rearrangement to produce , 2-(2-propenyl)?

अगर वट 2-(2-प्रोपेनाइल) उत्पादन करने के लिए क्लाइसेन पुनर्व्यवस्था से गुजरता है तो प्रारंभिक यौगिक क्या हो सकती है ?

A **Phenol**

फीनोल

B **2-Methyl-Phenol**

		2-मीथाइल-फीनोत्म
C	**Isopropyl benzene**	**आइसोप्रोयाइल बेंजीन**
D	**3-phenoxy propene**	**3-फेनोक्सीप्रोपीन**

Q.No: 166 What is the order of acidic strength of different nitrophenols?

विभिन्न नाइट्रोफीनाल्स की अम्लीय ताकत क्या क्रम है ?

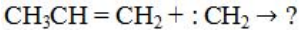
A	**para > meta > ortho**	**पेरा,मेटा,ओपौ**
B	**para > ortho > meta**	**पेरा,ओपौ,मेटा**
C	**ortho > para > meta**	**ओपौ,पेरा,मेटा**
D	**ortho > meta > para**	**ओपौ,मेटा,पेरा**

Q.No: 167 What will be the product when phenol is reacted with three molecules of bromine in the presence of water?

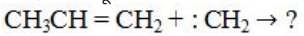
जल की उपस्थिति में जब ब्रोमिन के तीन अणुओं से फिनोल पर अभिक्रिया दी जाती है,तब उत्पाद क्या होता है ?

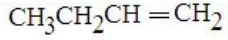
A	**2-Bromo phenol**	**2-ब्रोमोफीनोल**
B	**4-Bromo phenol**	**4-ब्रोमोफीनोल**
C	**2,4 –Di Bromo phenol**	**2,4-डाइ ब्रोमोफीनोल**
D	**2,4,6 – Tri Bromo phenol**	**2,4,6-ट्राइ ब्रोमोफीनोल**

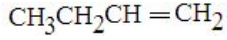
Q.No: 168 Complete the reaction:

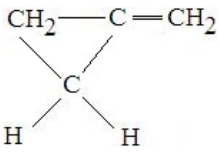


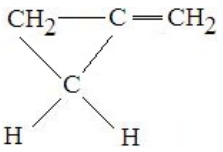
अभिक्रिया को पूरा करें।

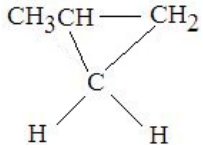


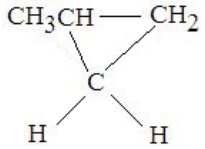
A 



B 



C 

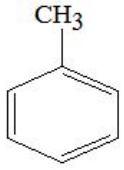


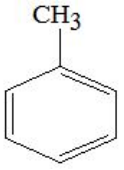
D **None of these**

इनमें से कोई नहीं

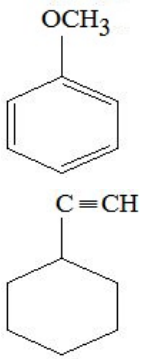
Q.No: 169 Write the structural formula of methylbenzene:

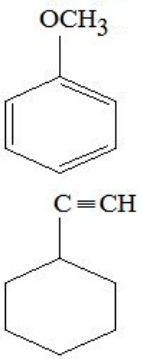
मिथाइलबैंजीन का संरचनात्मक सूत्र लिखिए:

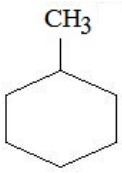
A 

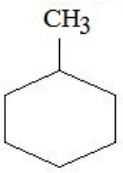


B

C 



D 



Q.No: 170 What will be the product for the reaction of fructose with bromine water?

ब्रोमिन जल के साथ फ्रुक्टोज की अभिक्रिया के लिए उत्पाद क्या होगा ?

A **Tartaric acid**

टारटरीक एसिड

B **Glutaric acid**

ग्लुटारिक एसिड

C **Glycolic acid**

ग्लायकोलिक अम्ल

D **No reaction**

कोई अभिक्रिया नहीं

Q.No: 171 What will be the stretching frequency of amine $(>N-H)$ group?

अमीनों समूह $(>N-H)$ का प्रतान आवृति क्या होगी ?

A **1000 – 1300**

1000 - 1300

B **3300 – 3500**

3300 - 3500

C **1680 – 1750**

1680 - 1750

D **1620 - 1680**

1620 - 1680

Q.No: 172 What will be the product when succinimide is heated in the prescence of Zinc?

जिंक की उपस्थिति में सक्सिनिमाइड गर्म होता है तो उत्पाद क्या होगा ?

A **Succinic – acid**

सक्सिनिक अम्ल

B **Thiopine**

थियोफीन

C **Pyrrole**

पिरोल

D **Furfural**

फरफ्यूरल

Q.No: 173 What is correct for electrocyclic reaction?

इलेक्ट्रोसाइक्लीक अभिक्रिया के लिए क्या सही है ?

A **A new σ-bond is formed**

एक नया σ-बंध बनता है

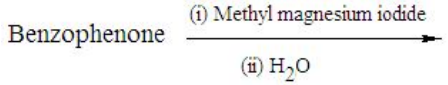
B **Intramolecular reaction occurs**

इंट्रामोलेक्युलर प्रतिक्रिया होती है

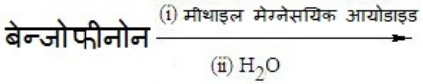
C **product has fewer π-bond than staring material** **उत्पाद के पास कम π-बंध होते है शुरूआती साम्रगी से**

D **All of these** **सभी सही है**

Q.No: 174 What will be the product for the following reaction?



निम्नलिखित अभिक्रिया का उत्पाद क्या होगा ?



A **1° alcohol** **1° ऐल्कोहॉल**

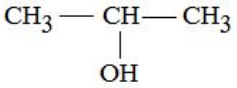
B **2° alcohol** **2° ऐल्कोहॉल**

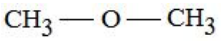
C **3° alcohol** **3° ऐल्कोहॉल**

D **None of these** **इनमें से कोई नहीं**

Q.No: 175 What will be the product when excess methanol is reacted with concentrated H_2SO_4?

अधिक मीथेनोल की सान्द्र H_2SO_4 के साथ अभिक्रिया से क्या उत्पाद होगा ?

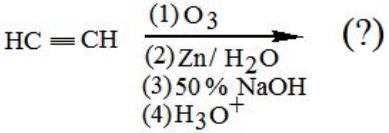
A 

B 

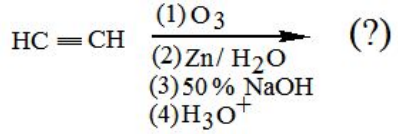
C

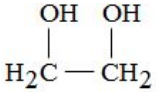
D **None of these** **इनमें से कोई नहीं**

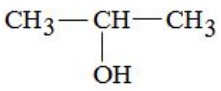
Q.No: 176 What will be the product for the following reaction?

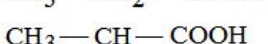


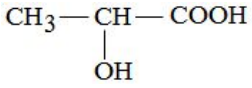
निम्नलिखित अभिक्रिया का उत्पाद क्या होगा ?



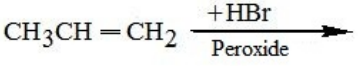
A 

B 

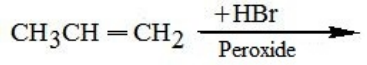
C 

D 

Q.No: 177 What will be the intermediate product(s) for the following reaction?



निम्नलिखित अभिक्रिया के लिए मध्यवर्ती उत्पाद क्या होंगे ?



A $\dot{C}_6H_5$

B $\dot{B}r$

C $CH_3\dot{C}HCH_2$ (Br)

D **All of these**

$\dot{C}_6H_5$

$\dot{B}r$

$CH_3\dot{C}HCH_2$ (Br)

सभी सही है

Q.No: 178 What will be the product in the reaction when any five membered heterocyclic compound undergoes nitration reaction?

जब कोई भी पांच वलय युक्त विषम चक्रिय यौगिक संयोजन की नाइट्रेशन प्रतिक्रिया करते है तो कौन सी उत्पाद मिलती है

A **2-nitro derivative**

B **3-nitro derivative**

C **2,3 - dinitro derivative**

D **3,4 - dinitro derivative**

2-नाइट्रो व्यु न्न

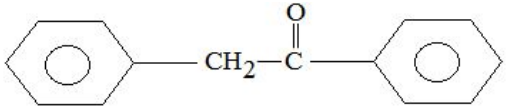
3-नाइट्रो व्यु न्न

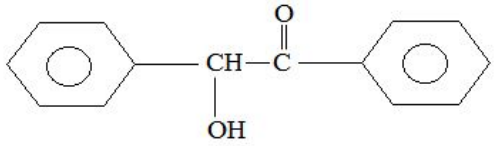
2,3-डायनाइट्रो व्यु न्न

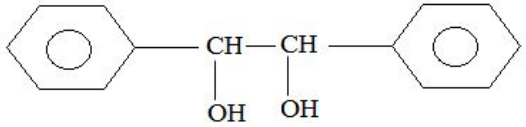
3,4-डायनाइट्रो व्यु न्न

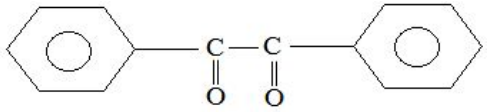
Q.No: 179 What will be the product when aromatic aldehydes condense in the presence of a catalyst cyanide ion

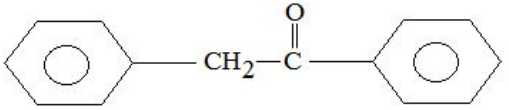
एरोमेटीफ आल्डिइाइडस जब साइनाइड आयन उत्प्रेरक की उपस्थिति में संघनन अभिक्रिया करता है तो क्या उत्पाद मिलता है ?

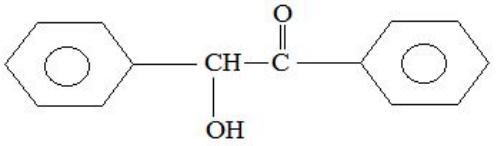
A 

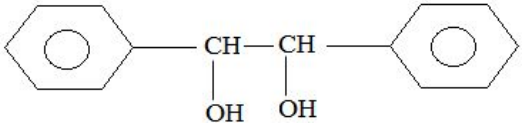
B 

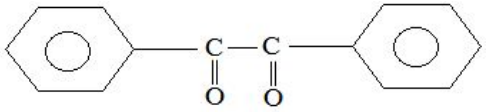
C 

D 









Q.No: 180 What will be the final product when benzene-1,3-disulfonic acid is fused with four molecules of sodium hydroxide?

जब बेंजान-1,3-डाइ सल्फोनिक एसिड को चार सोडियम हाइड्रोक्साइड अणुओं से फ्युज्ड क्रिया जाता है तो कौन सा अंतिम उत्पाद मिलता है

A **Phenol**

B **Disodium salt of benzene -1,3-disutonic acid**

C **Catechol**

D **Resocinol**

फिनोल

बेंजीन-1,3-डाइ सल्फोनीक एसीड का डाइ सोडियम लवण

केटेचोल

रिसोर्शानोल

Q.No: 181 What is correct for a sigmatropic reaction?

सिग्माट्रोपीक प्रतिक्रिया के लिए क्या सही है ?

A **One new σ-bond is formed**

एक नया σ-बंध बनता है

B **An allylic σ-bond at one end of a π-electron system migrates to the other end of the π-electron system**

π-इलेक्ट्रॉन प्रणाली के एक तरफ ऐलिलिंक σ-बंध π-इलेक्ट्रॉन प्रणाली के दूसरी ओर स्थानांतरित होता है

C **A new ring is formed**

एक नया वलय बनता है

D **One new σ-bond and a new π-bond form**

एक नया σ-बंध और एक नया π-बंध निर्मिण होता है

Q.No: 182 What is conrotatory mode in the electrolytic reaction?

इलेक्ट्रोसाइक्लिक अभिक्रिया में कानरोटेटरी प्रकम क्या है

A **Verticle mode**

उर्ध्वाधर प्रक्रम

B **Horizontal mode**

क्षैतिज प्रक्रम

C **Clockwise mode**

दक्षिणावर्त प्रक्रम

D **Counterclockwise mode**

वामावर्त प्रक्रम

Question Deleted

Q.No: 183 What is the type of following reaction?

निम्नलिखित अभिक्रिया किस प्रकार की है ?

A **[1,5] electrocyclic**

[1,5] इले ट्रोसाइक्लिक

B **[3,3] electrocyclic**

[3,3] इले ट्रोसाइक्लिक

C **[1,5] sigmatropic**

[1,5] सिग्माट्रापिक

D **[3,3] sigmatropic**

[3,3] सिग्माट्रापिक

Q.No: 184 1,2-Dichloropropene gives how many NMR signals?

1,2-डाईक्लोरोप्रोपेन कितने NMR सिगनल देता है

A **3**

3

B **4**

4

C **2**

2

D **None of these**

इनमें से कोई नहीं

Question Deleted

Q.No: 185 What is true for disrotatory in pericyclic reaction?

पेरिसाइक्लिक अभिक्रिया में विषम घूर्णन के लिए क्या सही है

A **It is applicable for any number of π-electrons**

यह π-इलेक्ट्रान्स के किसी भी नबर के लिये लागू होता है

B **It is applicable for odd number of π-electrons**

यह π-इलेक्ट्रान्स के विषम संख्या के लिये लागु होता है

C **It is forbidden for system with 4n π-electrons**

यह 4n π-इलेक्ट्रान्स प्रणाली के लिए प्रतिबंधित है

D **It is also forbidden for the systems with 4n+2 π-electrons**

यह 4n+2 π-इलेक्ट्रान्स प्रणाली के लिए भी प्रतिबंधित है

Q.No: 186 What is wrong for meso-tartaric acid?

मेसोटार्टरिक अम्ल के लिए क्या गलत है

A **It has two chiral centres**

इसके पास दो काइरल केन्द्र होते है

B **Eclipsed compound has a σ-plane**

ग्रसित यौगिक के पास σ- सतह होती है

C **Staggered compound has centre of inversion**

स्टगेर्ड यौगिक के पास उल्टा केन्द्र होता है

D **It is active due to presence of σ-plane or inversion centre**

यह σ- सतह अथवा उल्टे केन्द्र की उपस्थिति से सक्रिय रहता है

Q.No: 187 Which statement is correct showing the relationship between HOMO and LUMO ?

HOMO और LUMO का सही संबंध इनमें से कौन सा व्यक्तव्य दर्शाता है

A **HOMO has a lower energy than the LUMO**

HOMO की ऊर्जा कम होती है HOMO से

B **LUMO has a lower energy than the HOMO**

LUMO की ऊर्जा कम होती है HOMO से

C **HOMO and LUMO has some energy**

HOMO और LUMO की एक जैसी ऊर्जा होती है

D **There is no question of comparing the energy of both**

दोनों की ऊर्जा की तुलना करने का कोई सवाल की नहीं है

Q.No: 188 Which statement is wrong for the nitration of 3-Nitrochloro benzene?

3-नारट्रोक्लोरोबेन्जीन के नाइट्रेशन के लिए कौन सा व्यक्तव्य गलत है?

A **Can form 3,4-dinitrochloro-benzene**

3,4-गइनाइट्रोक्लोरोबेन्जीन बना सकता है

B **Can form 2,5-dinitrochloro-benzene**

2,5-डाइनाइट्रोक्लोरोबेन्जीन बना सकता है

C **Can form 2,3-dinitrochloro-benzene**

2,3-डाइनाइट्रोक्लोरोबेन्जीन बना सकता है

D **All of these**

इनमें से कोई नहीं

Q.No: 189 What is true between Butanone and acetone considering UV – spectra?

UV वर्कपर को ध्यान रखते हुये ब्युटेनोन और ऐसिटोन के लिए क्या सही है

A **Both are having same λmax value due to presence of Ketonic group**

किटोनिक समूह की उपस्थिति होने से दोनो के λmax का मान बराबर है

B **Butanone has higher λmax value than acetone**

ब्यूटोनोन का λmax मान ऐसिटोन से अधिक है

C **Acetone has higher λmax value than butanone**

ऐसिटोन के λmax का मान ब्यूटोनोन से अधिक है

D **Both will not absorb radiation in UV- visible region**

दोनों रेडियेशन का शोषण नहीं करेंगे UV- श्यमान क्षेत्र में

Q.No: 190 What is Ziegler – Natta catalys?

त्सीग्लर नट्टा उत्प्रेरक क्या है

A **Triethyl iron and $TiCl_4$**

ट्राइइथाइल आयरन और $TiCl_4$

B **Triethyl aluminium and $TiCl_4$**

ट्राइइथाइल अल्युमीनियम और $TiCl_4$

C **Tri ethyliron and $AlCl_3$**

ट्राइइथाइल आयरन और $AlCl_3$

D **Tri ethyl chromium and $AlCl_3$**

ट्राइइथाइल फ्रोमियम और $AlCl_3$

Q.No: 191 What will be the product of rearrangement when sys-methyl phenyl ketoxime is treated in acidic medium (H_2SO_4)?

सिस-मिथाइल फिनाइलकिटॉक्साइम की अम्लीय माध्यम (H_2SO_4) में प्रतिक्रिया से कौनसा पुनविन्यास उत्पाद मिलता है ?

A **Methyl benzoate**

मिथाइल ऐंजोऐट

B **Acetophenone**

एसीटोफिनोन

C **N-methyl benzamide**

N-मिथाइल बेंजामाइड

D **N-Phenyl ethanamide**

N-फिनाइलइथेनेमाइड

Q.No: 192 How many number of electrons are involved in the following reaction?

A **2**

B **6**

C **4**

D **8**

निम्नलिखित प्रतिक्रिया में कितने इलेक्ट्रान शामिल है

2

6

4

8

Q.No: 193 In a pericyclic reaction, if the reaction occurs at the opposite face of a π-system, it is said to be what?

A **HOMO**

B **LUMO**

C **Antarafacial**

D **Suprafacial**

पेरिसाइक्लिक अभिक्रिया में अगर अभिक्रिया π-प्रणाली की विपरीत दिशा में होती है तो उसका क्या कहते है?

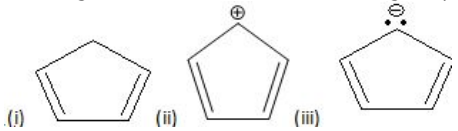
HOMO

LUMO

ऐन्टाराफेसीयल

सुप्राफेसीयल

Q.No: 194 According to Huckel, what is true for following compounds respectively?



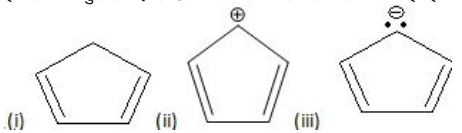
A **Non aromatic, aromatic, anti aromatic**

B **Non aromatic, anti aromatic, aromatic**

C **Anti-aromatic, aromatic, non aromatic**

D **Anti-aromatic, non aromatic, aromatic**

हकल के अनुसार निम्नलिखित यौगिको के लिये क्रमश: क्या सही है ?



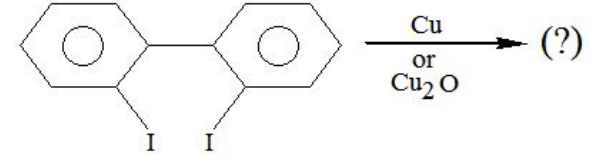
नोन-ऐरोमैटिक,ऐरोमैटिक,एन्टी-ऐरोमैटिक

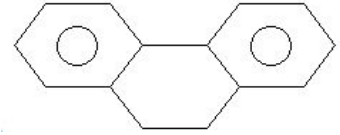
नोन-ऐरोमैटिक,एन्टी-ऐरोमैटिक,ऐरोमैटिक

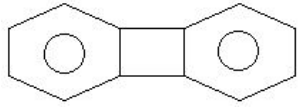
एन्टी-ऐरोमैटिक,ऐरोमैटिक,नोन-ऐरोमैटिक

एन्टा-ऐरोमैटिक,नोन-ऐरोमैटिक,ऐरोमैटिक

Q.No: 195 Complete the following reaction:

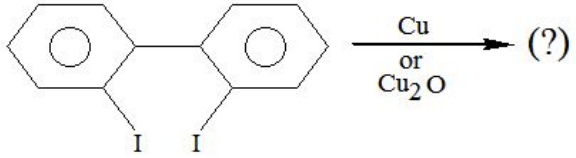


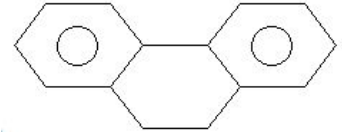
A 

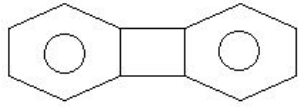
B 

C

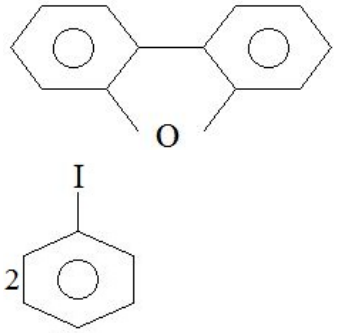
निम्नलिखित अभिक्रिया की पूर्ण करें:

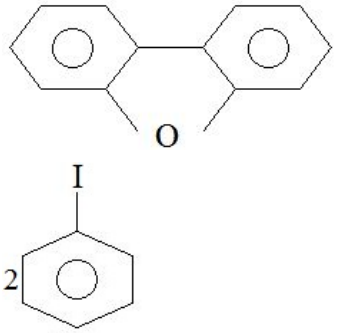






D





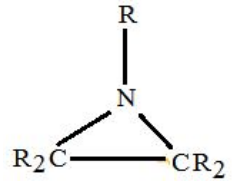
Q.No: 196 What will be the product of the reaction between nitrene and alkene?

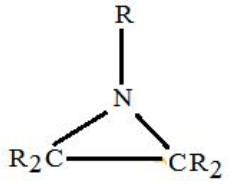
$$R- N + R_2C = CR_2 \longrightarrow (?)$$

नाइट्रीन और ऐलकीन की अभिक्रिया का उत्पाद क्या होगा ?

$$R- N + R_2C = CR_2 \longrightarrow (?)$$

A





B $R—N—CR_2—\ddot{C}R_2$

C $R_2C=CR—NR_2$

D **None of these**

इनमे से कोई नही

Q.No: 197 What is true for anti aromatic compound?

प्रतिऐरोमेटिक यौगिक के लिए क्या सही है

A **It should be planar**

वें समतलीय होने चाहिए

B **Bonding molecular orbital's are fully occupied**

आबंधी आण्विक अबिटिल पूर्णत: भरी हुई होती है

C **Antibonding molecular orbital's are containing electrons**

प्रति-आबंधन आर्बिटल में इले ट्रान होते है

D **All of these**

सभी सही है

Q.No: 198 Of the following which is glycolic acid?

निम्नलिखित में से ग्लाइकालिक अम्ल कौनसा है

A **HO - CH_2 - CH_2 - OH**

HO - CH_2 - CH_2 - OH

B **HOOC - CH_2 - CH_2 - COOH**

HOOC - CH_2 - CH_2 - COOH

C **HOOC - CH_2 - OH**

HOOC - CH_2 - OH

D **HOOC - CH_2 - CH_2 - OH**

HOOC - CH_2 - CH_2 - OH

Q.No: 199 Predict the product of the following reaction:

निम्नलिखित अभिक्रिया का उत्पाद बताइये:

$$3\ Ph-C\equiv CH \xrightarrow[(2)H_2O_2/OH^-]{(1)\ B_2H_6} (?)$$

A **3ph - CH_2 - CH_3**

B **3ph - CH_2 - OH**

C **3ph - CH_2 - CHO**

D **3ph - CH_2 - COOH**

Q.No: 200 Complete the following reaction:
Benzaldehyde + Hydroxylamine $\rightarrow$?

A **(E)-Oxime + (Z)-Oxime**

B **(E)-Oxime**

C **(Z)-Oxime**

D **Benzonitrile**

$$3\ Ph-C\equiv CH \xrightarrow[(2)H_2O_2/OH^-]{(1)\ B_2H_6} (?)$$

3ph - CH_2 - CH_3

3ph - CH_2 - OH

3ph - CH_2 - CHO

3ph - CH_2 - COOH

निम्नलिखित अभिक्रिया को पूर्ण करें :
बेन्ज़ाल्डीहाइड + डाइड्रोक्सील्एमीन $\rightarrow$?

(E) -ऑक्सिम+ (Z)-ऑक्सिम

(E)-ऑक्सिम

(Z)-ऑक्सिम

बेंजोनाइट्राइल