JEE Main 29 January 2025 Shift 2

Chemistry Question Paper with Answer Key

Q. No.	Questions	Answers
1	Which of the following form most stable carbocation?	$(Ph)_3C$-Br
2	Number of σ and π bonds respectively in hex-1-en-4-yne are	13, 3
3	0.41 g of $BaSO_4$ is obtained from 0.2 g of organic compound in Carius method. What is the percentage of sulphur present in organic compound?	28%
4	Which element in group 15 has the lowest Ionisation energy?	Bi
5	The number of benzenoid structural isomers having molecular formula C_9H_{12} which do not give Baeyer's reagent test is?	8
6	Consider the following thermochemical reactions and choose the correct option. C(diamond) → C(graphite) + x KJ C(diamond) + O_2 → CO_2 + y KJ C(graphite) + O_2 → CO_2 + z KJ	x = y - z
7	Which of the following will give azo dye test?	Aniline
8	Which of the following is an essential amino acid?	Valine

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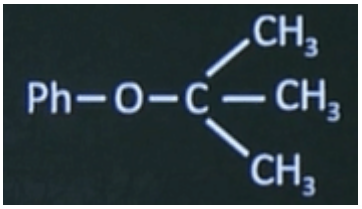
9	Which of the following ether react with HBr to form phenol?	
10	A drug becomes ineffective when it decomposes to 50% its concentration. If 16 mg of said drug becomes 4 mg in 12 months, find the time in which drug becomes ineffective given that decomposition of drug follows first order kinetics.	6 months
11	Which of the following gives predominantly O_2 on electrolysis among the following? A. Aq. $AgNO_3$ (Pt electrodes) B. White. $AgNO_3$ (Ag electrodes) C. Conc. H_2SO_4 (Pt electrodes) D. Dilute H_2SO_4 (Pt electrodes)	AD
12	Determine the type of oxide formed by an element (A) that has the smallest size among the following. Li, Na, K, Be, B, Mg	A_2O_3
13	Statement-I: In partition chromatography a thin film of liquid acts as stationary phase. Statement-II: Paper chromatography is not a type of partition chromatography.	Statement 1 is correct, Statement 2 is incorrect
14	7.3 g Benzalacetone is synthesized from 10.6 g of benzaldehyde using acetone as another reactant. Percentage yield of Benzalacetone is	50%
15	How many spectral lines are observed when a sample of hydrogen atoms *d* excited from n = 4 to n = 1?	6
16	Find number of non-bonding electron in NO_2^- ion is	12

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