

NEET HYDROGEN — PYQS

Max. Marks: 56

Questions: 14

Section A (MCQ) — 14 questions

Q.1 Methane reacts with steam at 1273 K in the presence of nickel catalyst to form :

[NEET (UG) 2026]

- (1) CO and H₂ (2) CO and H₂O
(3) CO₂ and H₂ (4) CO₂ and H₂O

Scan or tap for the full solution



Q.2 Which of the following statements are NOT correct?

- A. Hydrogen is used to reduce heavy metal oxides to metals.
B. Heavy water is used to study reaction mechanism.
C. Hydrogen is used to make saturated fats from oils.
D. The H–H bond dissociation enthalpy is lowest as compared to a single bond between two atoms of any element.
E. Hydrogen reduces oxides of metals that are more active than iron.

Choose the most appropriate answer from the options given below:

[NEET (UG) 2023]

- (1) B, D only (2) D, E only
(3) A, B, C only (4) B, C, D, E only

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Q.3 Match List-I with List-II.

List-I (Hydrides)		List-II (Nature)	
a.	MgH ₂	i.	Electron precise
b.	GeH ₄	ii.	Electron deficient
c.	B ₂ H ₆	iii.	Electron rich
d.	HF	iv.	Ionic

Choose the correct answer from the options given below:

[NEET (UG) 2022]

- (1) (a)-(iv), (b)-(i), (c)-(ii), (d)-(iii)
(2) (a)-(iii), (b)-(i), (c)-(ii), (d)-(iv)
(3) (a)-(i), (b)-(ii), (c)-(iv), (d)-(iii)
(4) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)

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Q.4 The element used for welding metals with high melting points is [NEET (UG) 2022 (Phase 2)]

- (1) He (2) Cl₂ (3) H₂ (4) Ne

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Q.5 Tritium, a radioactive isotope of hydrogen, emits which of the following particles? [NEET (UG) 2021]

- (1) Neutron (n) (2) Beta (β⁻)
(3) Alpha (α) (4) Gamma (γ)

Scan or tap for the full solution



Q.6 Match the following and identify the correct option.

[NEET (UG) 2020]

List-I		List-II	
a.	CO(g) + H ₂ (g)	i.	Mg(HCO ₃) ₂ + Ca(HCO ₃) ₂
b.	Temporary hardness of water	ii.	An electron deficient hydride
c.	B ₂ H ₆	iii.	Synthesis gas
d.	H ₂ O ₂	iv.	Non-planar structure

- (1) (a)-(iii), (b)-(ii), (c)-(i), (d)-(iv)
(2) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)
(3) (a)-(i), (b)-(iii), (c)-(ii), (d)-(iv)
(4) (a)-(iii), (b)-(i), (c)-(ii), (d)-(iv)

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Q.7 The method used to remove temporary hardness of water is : [NEET (UG) 2019]

- (1) Ion-exchange method
(2) Synthetic resins method
(3) Calgon's method
(4) Clark's method

Scan or tap for the full solution



Q.8 Among CaH₂, BeH₂, BaH₂, the order of ionic character is [NEET 2018]

- (1) BeH₂ < CaH₂ < BaH₂ (2) CaH₂ < BeH₂ < BaH₂
(3) BeH₂ < BaH₂ < CaH₂ (4) BaH₂ < BeH₂ < CaH₂

Scan or tap for the full solution



Q.9 Which of the following statements about hydrogen is incorrect? [NEET 2016 (Phase 1)]

- (1) Hydronium ion, H_3O^+ exists freely in solution.
- (2) Dihydrogen does not act as a reducing agent.
- (3) Hydrogen has three isotopes of which tritium is the most common.
- (4) Hydrogen never acts as cation in ionic salts.

Scan or tap for the full solution



Q.10 (I) $\text{H}_2\text{O}_2 + \text{O}_3 \longrightarrow \text{H}_2\text{O} + 2\text{O}_2$

(II) $\text{H}_2\text{O}_2 + \text{Ag}_2\text{O} \longrightarrow 2\text{Ag} + \text{H}_2\text{O} + \text{O}_2$

Role of hydrogen peroxide in the above reactions is respectively [AIPMT 2014]

- (1) oxidizing in (I) and reducing in (II)
- (2) reducing in (I) and oxidizing in (II)
- (3) reducing in (I) and (II)
- (4) oxidizing in (I) and (II)

Scan or tap for the full solution



Q.11 Some statements about heavy water are given below:

Which of the above statements are correct?

- (i) Heavy water is used as a moderator in nuclear reactors.
- (ii) Heavy water is more associated than ordinary water.
- (iii) Heavy water is more effective solvent than ordinary water.

- (1) (i) and (ii)
- (2) (i), (ii) and (iii)
- (3) (ii) and (iii)
- (4) (i) and (iii)

Scan or tap for the full solution



Q.12 Which one of the following molecular hydrides acts as a Lewis acid? [AIPMT 2010 (Prelims)]

- (1) NH_3
- (2) H_2O
- (3) B_2H_6
- (4) CH_4

Scan or tap for the full solution



Q.13 The structure of H_2O_2 is [AIPMT 2003]

- (1) spherical
- (2) non-planar
- (3) planar
- (4) linear

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Q.14 The life span of atomic hydrogen is [AIPMT 2000]

- (1) fraction of one second
- (2) one year
- (3) one hour
- (4) one day

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3	4	5	6	7
Ans.	1	2	1	3	2	4	4
Ques.	8	9	10	11	12	13	14
Ans.	1	2, 3	3	1	3	2	1