

Sample Questions of HAT-Undergraduate Program (UG-M, UG-E & UG-S) 2021:

Physics:

1. To get a resultant displacement of 10 cm two displacement vectors one of magnitude 6 m and another of 8m should be combined.
 - a. Add an angle 60 degrees
 - b. Perpendicular to each
 - c. Parallel
 - d. Anti parallel
2. Which of the following devices operates as a heat engine in reverse order?
 - a. Television
 - b. Refrigerators
 - c. Vacuum tube
 - d. Microwave

Chemistry

3. Which is an ore of potassium?
 - a. Carnallite
 - b. Cryolite
 - c. Bauxite
 - d. Dolomite
4. Consider the reaction $\text{PCl}_5 \leftrightarrow \text{PCl}_3 + \text{Cl}_2$ in a closed container at equilibrium at a fixed temp. What will be the effect of adding more PCl_5 on equilibrium concentration of Cl_2
 - a. It increases
 - b. It decreases
 - c. It remain unaffected
 - d. Cannot predicted without the value of K_p

Mathematics

5. If A and B are two independent events than $P(A \cap B) = ?$
 - a. $P(A) - P(B)$
 - b. $P(A) + P(B)$
 - c. $P(A) \times P(B)$
 - d. none
6. The number of terms in the expansion of $(a + b)^{100} + (a - b)^{100}$ after simplification are?
 - a. 202
 - b. 50
 - c. 51
 - d. 100

English:

Synonyms and Antonyms

7. ABJURE:
 - a. Discuss
 - b. Renounce
 - c. Run off secretly
 - d. Perjure
 - e. Project
8. AMBIGUITY:
 - a. Extent
 - b. Success
 - c. Clarity
 - d. Normality
 - e. Expression
9. I saw him yesterday's night but he was looking too tired. (Identify the error)
 - a. Saw
 - b. too
 - c. but
 - d. Yesterday's night

Biology:

10. Gigantism in human beings is caused due to over secretion of
 - a. Thyrotrophin
 - b. Corticotrophin
 - c. Somatotrophin
 - d. Prolactin
11. The gene of choice can also be synthesized in the laboratory from mRNA, using reverse transcriptase. This DNA molecule is called:
 - a. Complementary DNA
 - b. Replicative DNA
 - c. Synthetic DNA
 - d. ssDNA

General Math:

12. In a school where there are 150 students in all, 100 students study Physics and 70 study English. How many students study both?
 - a. 10
 - b. 15
 - c. 20
 - d. 25

13. Three pumps, working 8 hours a day, can empty a tank in 2 days. How many hours a day must 4 pumps work to empty the tank in 1 day?
- a. 9
 - b. 10
 - c. 11
 - d. 12

Islamic Studies:

14. Tribe of Khuza joined Muslims after which
- a. Treaty of Hudaiba
 - b. Battle of Uhad
 - c. Migration to Mecca
 - d. None of above
15. Which of the following is NOT a part of Ashra Mubashra?
- a. Hazrat Saad ibn –e – Abi Waqas (RA)
 - b. Hazrat Abdullah Bin Amir (RA)
 - c. Hazrat Abu Obaida ibn- al- Jarah (RA)
 - d. Hazrat Talha (RA)

Pak Studies:

16. Mujaddid Alf e Sani was the leader of :
- a. Khilafati movement
 - b. Farizi movement
 - c. Naqshbandi movement
 - d. all of the above
17. Day of Deliverance was celebrated because:
- a. Quaid e Azam delivered his promise to the people
 - b. Muslims had won their separate state
 - c. All Congress ministers resigned
 - d. The British had left India for good