

### MHTCET 2024 Question Paper 10 Shift 1

1. What is the Instrument for structure binding?
2. Which element is completely filled f orbital in expected e configuration?
3. What is the oxidation state?
4. Scoop is a mixture of?
5. What is the moment of Inertia ( Sphere and Disc)?
6. What is Terminal Velocity?
7. What is wavelength and absolute temperature?
8. How many times a coin should be tossed so that atleast one head lands 99% times?
9. If Y is a function of x and  $\log(x+y) = 2xy$  then value of  $y(0)$  is?
10. If the function of  $f(x)$  is continuous in  $0 < x < 22$  then the value of  $2a+3b$  is?
11. If X Y Z are in A.P. and  $\tan^{-1}x$ ,  $\tan^{-1}y$  and  $\tan^{-1}z$  are also in A.P. then

12. M aqueous solution of glucose has osmotic pressure 4.9 atm at 300 K. What is the concentration of glucose if it has osmotic pressure 1.5 atm at same temperature?
13. Identify the reaction in which carbonyl group of aldehydes and ketones is reduced to methylene group on treatment with hydrazine followed by heating with sodium hydroxide in ethylene glycol?
14. Calculate the pH buffer solution containing 0.01M salt and 0.004 M weak acid.
15. What is the concentration of OH<sup>-</sup> ion in a solution containing 0.05 M H<sup>+</sup> ions?
16. What is the oxidation state of carbon in CaC<sub>2</sub> and K<sub>2</sub>C<sub>2</sub>O<sub>4</sub> respectively?
17. Oxidation state of manganese in potassium permanganate is?
18. Identify neutral legend from the following:
19. Identify monodenate ligand from the following:
20. Which from the following is coordinate complexes contains anionic and neutral ligands in it?
21. What is the formula charge of on sulfur in the following Lewis Structure?
22. Which of the following compounds exhibits +2 oxidations state of oxygen?
23. What is the position of transition elements from Sc to Zn in long form of periodic table?

24. Identify the product obtained when isopropyl bromide is reacted with metallic sodium in dry ether?

Ans: Isohexane