

## MHT CET MEMORY-BASED QUESTION PAPER 2021

23 SEPTEMBER 2021

1. Find area of parabola  $y^2=4ax$  and limit is  $x=a$
2. If  $3\sin 2x=2\sin 3x$  then  $\sin x=?$
3. Write foot of normal to a line in vector
4. Area enclosed between  $y^2=8x$  and  $x^2=8y$  is a.  $64/3$  b.  $16/3$  c.  $32/3$  d.  $8/3$
5. Which protein is found in the nail?
6.  $\int_0^1 |5x-3| dx=?$
7. Point A, B was given. Write Eqn of a plane perpendicular to AB passing through the midpoint of AB
8. Find projection of a vector on b vector Vector given
9. In Simple cubic structure edge length =
10.  $\int e^{(e^x)+x} dx=?$
11. Order and degree of the differential eqn:  $(d^2y/dx^2)^{1/3}=(dy/dx)^{1/2}$
12.  $3\sqrt{y}''=\sqrt{y}'$  find order and degree? a. 2,2 b. 2,1 c. 2,3 d. 1,3
13. Questions based on  $I_e= I_b+ I_c$
14. The area formed by  $y^2=8x$  and  $x^2=8y$
15. Integration  $0$  to  $\pi$   $1/4+3\cos x dx$  ? a. Zero b.  $\sqrt{7}/2$  c.  $-1$  d.  $2/\sqrt{7}$
16. Monomers of terylene are?
17. The formula of rate constant for the zero-order reaction
18. The coin is tossed 100 times. What is the probability that the head comes even a number of times? a.  $1/8$  b.  $3/8$  c.  $1/2$  d.  $3/4$
19. Identify extensive property? Temperature/ Viscosity/ Surface Tension/ Heat capacity
20. Teflon is made with which monomer - tetrafluoroethane
21. A cell equation was given of nickel and copper and the question was asked that which of it is behaving as an oxidising agent.