HSC 3 March 2017

SECTION-TI

Que Multiple choice question (2M each)

Date

(i) Given that XUB (20, p), if E(x) \$5 then the value of q is

(a) 1 (b) 1 (c) 3 (

(ii) If y = cost | x] + cosec | (1+x2), then

(a) x (b) 0 0 (c) 1 (d) 7

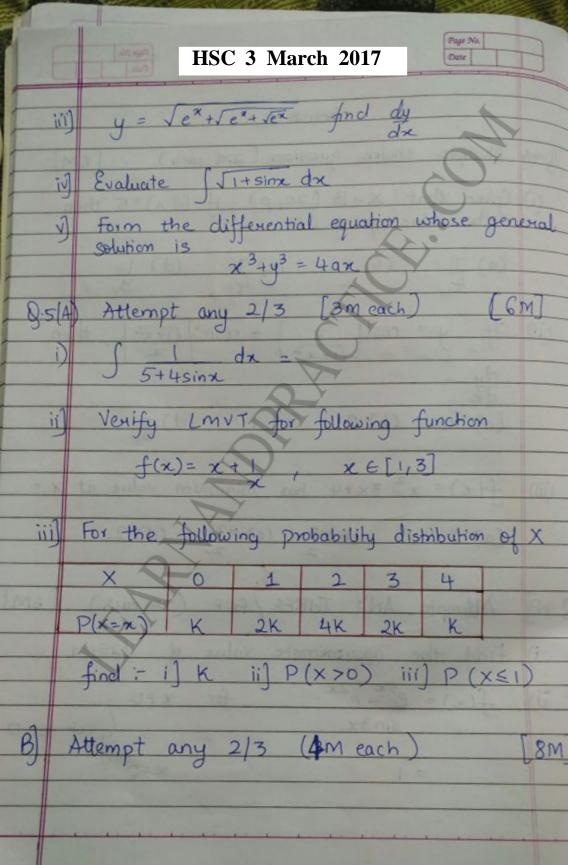
(iii) $f(x) = x^2 3x + 4$ has minimum value at x =

(a) 0 (b) 3 (c) -3 (d) 2

848 Attempt ANY THREE/ FIVE (2M each) [6M]

Find the approximate value of J25.01

 $f(x) = e^{5x} = e^{2x}$ $\sin 3x$ for x #0



HSC 3 March 2017 if If ax2+2hny+by2=0 then show that dy = 0 ii) Examine continuity of the function fex) at x = 0, where $f(x) = 10^{x} + 7^{x} - 14^{x} - 5^{x}$ $1 - \cos 4x$ iii) Evaluate Jlog (1+ tonx)dx Q.6(A) Attempt any 2/3 (3M each) [6M If I u and v are too functions of x then Junda = usvdx - Stely Svdx Jdx If y = f(u) is a differentiable function of u and u = g(x) is a differentiable function of x, then prove that y = f(g(x)) is a differentiable function of x and dy - dy dy

$$P(x) = {4 \choose x} {1 \choose 2} {x \choose 2}, x = d \times 3$$

ii) Find P(
$$x \le 3$$
), P($2 < x < 5$)
iii) Find P($x \le 5 \mid x > 3$)

= 0, if f(x) is an odd f(x)

$$(1-x^2)\frac{d^2y}{dx^2} - x\frac{dy}{dx} + m^2y = 0$$