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INDIAN SCHOOL MUSCAT SECOND PERIODIC TEST

MATHEMATICS

CLASS: XII Sub. Code: 041 Time Allotted: 50min

19.09.2018 Max. Marks: 20

GENERAL INSTRUCTIONS:

- All questions are compulsory.
- Questions 1 to 4 carry TWO marks each.
- Questions 5 to 7 carry FOUR marks each.

1. Evaluate:
$$\int \frac{dx}{4-2x-x^2}$$
 (2)

2.
$$\operatorname{Evaluate} : \int_{0}^{\frac{\pi}{2}} \frac{(\sin x - \cos x)}{1 + \sin x \cos x} \, dx$$
 (2)

3. Evaluate:
$$\int x\sqrt{x+2} dx$$
 (2)

4. Evaluate:
$$\int \sin 3x \cos 2x \, dx$$
 (2)

5. Evaluate:
$$\int \frac{(x^2 + 5)}{(x + 1)(x^2 + 4)} dx$$
 (4)

6. Evaluate :
$$\int \frac{x \sin^{-1} x}{\sqrt{1 - x^2}} dx$$
 (4)

7. Evaluate the following definite integral as limit of sum:-

$$\int_{1}^{3} (2x^2 + 5x) dx$$

End of the Question Paper