**KFUPM--Term 172**

Math 201 Quiz 5(a) Time: 25 minutes Date: 19- 4- 2018

| Name | ID | Sr | Sec. 6 | Marks:- |
|---|---|---|---|---|
| | | | | |

Q 1. Find the local extreme values of the function $f(x,y) = x^2 - y^2 - 2x - 2y + 6$

Q2. Evaluate $\int_0^1 \int_0^1 xy\sqrt{x^2+y^2}\, dydx$.

**KFUPM—Term 172**

Math 201 Quiz 5(b) Time: 25 minutes Date: 19- 4- 2018

| Name | ID | Sr | Sec. 6 | Marks:- |
|---|---|---|---|---|
| | | | | |

Q 1. Find the local extreme values of the function $f(x,y) = 3y^2 - 2y^3 - 3x^2 + 6xy$

Q2. Evaluate $\int_0^1 \int_0^{\sqrt{2}} \frac{1+x^2}{2+y^2}\, dydx$.

**KFUPM—Term 172**

Math 201 Quiz 5(c) Time: 25 minutes Date: 19- 4- 2018

| Name | ID | Sr | Sec. | Marks: |
|---|---|---|---|---|
| | | | | |

Q 1. Find all critical points of $f(x,y) = 2(1+x+y) - x^2 - y^2$.

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Q2. Evaluate $\int_0^1 \int_{-3}^3 \frac{xy^2}{1+x^2}\, dydx$.

**KFUPM—Term 172**

Math 201 Quiz 5(d) Time: 25 minutes Date: 19- 4- 2018

| Name | ID | Sr | Sec. | Marks:- |
|---|---|---|---|---|
| | | | | |

Q 1. Find the local maximum and minimum values and saddle points of the function

$$f(x,y) = x^4 + y^4 - 4xy + 4.$$

Q2. Evaluate $\int_1^4 \int_1^2 \left(\frac{x}{y^2} + \frac{y^2}{x}\right) dydx$.