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# MTH301 Final Term Paper shared by Student

AｌｌʑY KʜʌN on August 18, 2017 at 6:29pm

Today is my paper......

total question is 52.

40 mcqs & 12 subjective question.

4 question 2 marks, 4 question 3 marks & 4 question 5 marks.

70% mcqs **moaz file** se thy.

or **subjective question**

2 subjective question **even, odd or neither function** k bare m thy

1 question **grad div.A** K  bare m tha.

or 1 question **chain rule** wala tha.

# MTH301 Final Term Paper shared by Student

by ALI ALI on August 19, 2017 at 7:35pm

Asslam o Alikum

MCQZ 60% from moazz file and book also.

subjective:

1.Determine the fourier co-efficient a0 of the following function.
$f x x x ( ) 0 2 = 2 \pi$
2..Determine the fourier co-efficient bn of the following function

3. double integral

4.Prove whether the following function is even, odd or neither.
$f x=x3ex$

5.Curl (curl of a vector function) find krna tha
6.rectangular coordinates find krny thy from polar coordinates given thy

x=rsintheta

y=rcostheta  formula

7.chan rule apply krna tha

8.Use Wallis sine formula to evaluate
5
sin x dx
∫

9. critical points find out krny thy

10. odd and even function find krny thy.

# MTH301 Final Term Paper 2016 shared by Student

**Question#1)** Prove whether the following function is even, odd or neither. $f(x) = x^3 + x^2$  **(2 Marks)**

**Question#2)** Given . Find scalar triple product of these vectors. $\vec{a} \times \vec{b} = \sqrt{2}i + 3j$ and $\vec{c} = \dfrac{1}{\sqrt{2}}i + k$ **(2 Marks)**

**Question#3)** Given the equations of two curves $y = x^2$ and $y = \sqrt{x}$ Find the intersecting points of these curves. **(2 Marks)**

**Question#4)** Find $\|r(t)\|$ where **(2 Marks)**
$$r(t) = t\hat{i} + (t-1)\hat{j} + 2\hat{k}$$

**Question#5)** Determine whether the following differential is exact or not. $dz = (2xy + 6x)\,dx + (x^2 + 2y^3)\,dy$

**(3 Marks)**

**Question#6 )** What is the arc-length of the curve $\vec{r}(t) = (4 + 3t)\,\hat{i} + (2 - 2t)\,\hat{j}$ when $3 \le t \le 4$

**(3 Marks)**

**Question#7)** $If\ g = f(x,\ y,\ z)$

$x = x(r,\ s,\ t)$

$y = y(r,\ s,\ t)$

$z = z(r,\ s,\ t)$

$State\ the\ chain\ rule\ for\ \dfrac{\partial g}{\partial t}$  **(3 Marks)**

**Question#8)** Determine the Fourier coefficient $a_0$ for a periodic function $f(t)$ of period 2 defined by
**(3 Marks)** $f(t) = \begin{cases} 4(1+t) & -1 < t < 0 \\ 0 & 0 < t < 1 \end{cases}$

**Question#9)** Evaluate $\int_1^4 \int_0^2 (6x^2 + 4xy^3)\,dx\,dy$ **(5 Marks)**

$$\int_0^{\frac{\pi}{2}} \int_0^{\sin\theta} r\cos\theta\,dr\,d\theta$$

3

**Question#10)** Evaluate the following double integral           **(5 Marks)**

**Question#11)** Evaluate the following line integral with respect to arc-length s

$$\int_C \left(\frac{1}{1+x}\right) ds$$

where C is the curve $\quad x = t, \quad y = \frac{2}{3}t^{\frac{3}{2}} \quad and \quad 0 \leq t \leq 3$     **(5 Marks)**

**Question#12 )** Determine whether the following vector field $\vec{F}$ is conservative or not.

$$\vec{F}(x,\ y,\ z) = (4x - z)\hat{i} + (3y + z)\hat{j} + (y - x)\hat{k}$$ **(5 Marks)**

**Calculus II  (MTH301)**
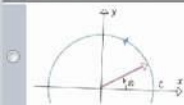
| Question:  1  (Marks: 1) | Attempted Questions:  0 | Total Questions:  52 |

Match the vector-valued function with its graph.

$$r(t) = (a\cos t)\hat{i} + (a\sin t)\hat{j} + (ct)\hat{k}$$

where a and c are positive constants and  $0 \le t \le 2\pi$

**Choices:**



**TIME LEFT**
**120**

Last Question

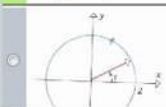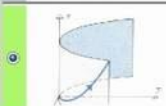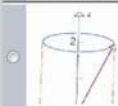**Calculus II  (MTH301)**

| Question:  2  (Marks: 1) | Attempted Questions:  1 | Total Questions:  52 |

Match the following vector-valued function with its graph.

$$r(t) = t\hat{i} + t^2\hat{j} + t^3\hat{k}$$   and   $t \ge 0$

**Choices:**



**TIME LEFT**
**119**

Save Changes

**Calculus II (MTH301)**

Question: **3** (Marks: 1) Attempted Questions: **2** Total Questions: **52**

What are the parametric equations that correspond to the following vector equation?

$$\vec{r}(t) = \sin^2 t \, \hat{i} + (1 - \cos 2t) \, \hat{j}$$

**Choices:**

○ $x = \sin^2 t$ , $y = 1 - \cos 2t$ , $z = 0$

○ $y = \sin^2 t$ , $x = 1 - \cos 2t$ , $z = 0$

○ $x = \sin^2 t$ , $y = 1 - \cos 2t$ , $z = 1$

○ $x = \sin^2 t$ , $y = \cos 2t$ , $z = 1$

**TIME LEFT**
**119**

**Calculus II (MTH301)**

Question: **4** (Marks: 1) Attempted Questions: **3** Total Questions: **52**

What are the parametric equations that correspond to the following vector equation?

$$r(t) = (2t - 1)\hat{i} - 3\sqrt{t}\,\hat{j} + \sin 3t\,\hat{k}$$

**Choices:**

○ $z = 2t - 1$ , $x = -3\sqrt{t}$ , $y = \sin 3t$

○ $y = 2t - 1$ , $x = -3\sqrt{t}$ , $z = \sin 3t$

○ $x = 2t - 1$ , $z = -3\sqrt{t}$ , $y = \sin 3t$

○ $x = 2t - 1$ , $y = -3\sqrt{t}$ , $z = \sin 3t$

**TIME LEFT**
**118**

**Calculus II (MTH301)**

The following differential is exact

$$dz = (x^2 y + y)\, dx - x\, dy$$

**Choices:**

○ True

◉ False

TIME LEFT
**116**

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**Calculus II (MTH301)**

The following differential is exact

$$dz = (x^2 + y^2)\, dx - 2xy\, dy$$

**Choices:**

◉ True

○ False

TIME LEFT
**116**

**Calculus II (MTH301)**

Which one of the following is correct Wallis Cosine formula when $n$ is even and $n \geq 2$?

**Choices:**

○ $\int_0^{\frac{\pi}{2}} \cos^n x \, dx = \frac{(n-1)}{n} \frac{(n-3)}{(n-2)} \frac{(n-5)}{(n-4)} - - - - - - \frac{6}{7} \frac{4}{5} \frac{2}{3}$

◉ $\int_0^{\frac{\pi}{2}} \cos^n x \, dx = \frac{\pi}{2} \frac{(n-1)}{n} \frac{(n-3)}{(n-2)} \frac{(n-5)}{(n-4)} - - - - - - \frac{5}{6} \frac{3}{4} \frac{1}{2}$

○ $\int_0^{\frac{\pi}{2}} \cos^n x \, dx = \frac{\pi}{2} \frac{(n)}{(n-1)} \frac{(n-2)}{(n-3)} \frac{(n-4)}{(n-5)} - - - - - - \frac{6}{5} \frac{4}{3} \frac{2}{1}$

○ $\int_0^{\frac{\pi}{2}} \cos^n x \, dx = \frac{(n)}{(n-1)} \frac{(n-2)}{(n-3)} \frac{(n-4)}{(n-5)} - - - - - - \frac{6}{5} \frac{4}{3} \frac{2}{1}$

**TIME LEFT 115**

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**Calculus II (MTH301)**

Which one of the following is correct Wallis Cosine formula when $n$ is odd and $n \geq 3$?

**Choices:**

○ $\int_0^{\frac{\pi}{2}} \cos^n x \, dx = \frac{\pi}{2} \frac{(n-1)}{n} \frac{(n-3)}{(n-2)} \frac{(n-5)}{(n-4)} - - - - - - \frac{5}{6} \frac{3}{4} \frac{1}{2}$

○ $\int_0^{\frac{\pi}{2}} \cos^n x \, dx = \frac{\pi}{2} \frac{(n)}{(n-1)} \frac{(n-2)}{(n-3)} \frac{(n-4)}{(n-5)} - - - - - - \frac{6}{5} \frac{4}{3} \frac{2}{1}$

◉ $\int_0^{\frac{\pi}{2}} \cos^n x \, dx = \frac{(n)}{(n-1)} \frac{(n-2)}{(n-3)} \frac{(n-4)}{(n-5)} - - - - - - \frac{6}{5} \frac{4}{3} \frac{2}{1}$

○ $\int_0^{\frac{\pi}{2}} \cos^n x \, dx = \frac{(n-1)}{n} \frac{(n-3)}{(n-2)} \frac{(n-5)}{(n-4)} - - - - - - \frac{6}{7} \frac{4}{5} \frac{2}{3}$

**TIME LEFT 113**

**Calculus II (MTH301)**

Question: **12** (Marks: 1)  Attempted Questions: **11**  Total Questions: **52**

Which of the following condition must be satisfied for a vector field $\vec{F}$ to be a conservative vector field?

**Choices:**

○ $\vec{F} = 0$

○ $grad\ \vec{F} = 0$

○ $div\ \vec{F} = 0$

◉ $curl\ \vec{F} = 0$

TIME LEFT
**113**

**Calculus II (MTH301)**

Question: **13** (Marks: 1)  Attempted Questions: **12**  Total Questions: **52**

What is the amplitude of a periodic function defined by $f(x) = \sin\frac{x}{3}$ ?

**Choices:**

○ 0

○ 1

◉ $\frac{1}{3}$

○ Does not exist

TIME LEFT
**112**

**Calculus II  (MTH301)**

Question:  **15**   (Marks: 1)                    Attempted Questions:  **14**   Total Questions:  **52**

What is the period of a periodic function defined by $f(x) = \sin \dfrac{x}{2}$ ?

**Choices:**

- $\dfrac{\pi}{2}$
- $\pi$
- $\dfrac{3\pi}{2}$
- $4\pi$

TIME LEFT
**111**

Calculus II (MTH301)

Question: **16** (Marks: 1)     Attempted Questions: **16**   Total Questions: **52**

What is the period of periodic function whose graph is as below?



**Choices:**

0

4

6

8

TIME LEFT
**111**

Next Question

**Calculus II (MTH301)**

Let $L$ denotes the Laplace Transform.

If $L\{F(t)\} = f(s)$ where $s$ is a constant, then which of the following equation holds?

**Choices:**

○ $L\{t\,F(t)\} = -\dfrac{d}{ds}\{f(s)\}$

○ $L\{t\,F(t)\} = f(s+t)$

○ $L\{t\,F(t)\} = f(s)$

○ $L\{t\,F(t)\} = \displaystyle\int_{t}^{\infty} f(s)\,ds$

**TIME LEFT**
**111**

**Calculus II (MTH301)**

The function $f(x) = x^3 e^x$ is ------------

**Choices:**

○ Even function

○ Odd function

○ Neither even nor odd

**TIME LEFT**
**111**

**Calculus II  (MTH301)**

Sign of line integral is reversed when ----------

**Choices:**

- ○ path of integration is divided into parts.

- ○ path of integration is parallel to y-axis.

- ◉ direction of path of integration is reversed.

- ○ path of integration is parallel to x-axis.

**TIME LEFT**
**108**

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**Calculus II  (MTH301)**

Let the functions $P(x, y)$ and $Q(x, y)$ are finite and continuous inside and at the boundary of a closed curve C in the xy-plane. If $(P\,dx + Q\,dy)$ is an exact differential then

$$\oint_c (P\,dx + Q\,dy) =$$

**Choices:**

- ◉ Zero

- ○ One

- ○ Infinite

**TIME LEFT**
**108**

**Calculus II (MTH301)**

Question: **24** (Marks: 1)      Attempted Questions: **23**    Total Questions: **52**

What is the value of $L\{e^{5t}\}$ if $L$ denotes laplace transform?

**Choices:**

(•) $L\{e^{5t}\} = \dfrac{1}{s-5}$

( ) $L\{e^{5t}\} = \dfrac{s}{s^2+25}$

( ) $L\{e^{5t}\} = \dfrac{5}{s^2+25}$

( ) $L\{e^{5t}\} = \dfrac{5!}{s^6}$

**TIME LEFT**
**107**

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**Calculus II (MTH301)**

Question: **25** (Marks: 1)      Attempted Questions: **24**    Total Questions: **52**

What is Laplace Inverse Transform of $\dfrac{5}{s^2+25}$

**Choices:**

( ) $L^{-1}\left\{\dfrac{5}{s^2+25}\right\} = \sin\,5t$

( ) $L^{-1}\left\{\dfrac{5}{s^2+25}\right\} = \cos\,5t$

(•) $L^{-1}\left\{\dfrac{5}{s^2+25}\right\} = \sin\,25t$

( ) $L^{-1}\left\{\dfrac{5}{s^2+25}\right\} = \cos\,25t$

**TIME LEFT**
**106**

**Calculus II (MTH301)**

$$\int_C (xy)\, dx + y^2\, dy$$

Evaluate the line integral         where C is the line segment from (0, 0) to (0, 3).

**Choices:**

- 9
- 4
- 0
- -4

TIME LEFT
103

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**Calculus II (MTH301)**

A vector field is a vector each of whose components is a scalar field

**Choices:**

- True
- False

TIME LEFT
103

**Calculus II (MTH301)**

Question: **30** (Marks: 1)    Attempted Questions: **29**    Total Questions: **52**
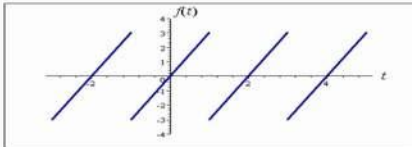


Choices:

An odd function

An even function

Neither even nor odd

TIME LEFT
**103**

**Calculus II (MTH301)**

Question: **31** (Marks: 1)    Attempted Questions: **30**    Total Questions: **52**

How many real numbers exist between two consecutive integers?

Choices:

0

1

Infinite

None

TIME LEFT
**102**

**Calculus II (MTH301)**

Question: **33** (Marks: 1)    Attempted Questions: **32** Total Questions: **52**

The angles which a line makes with positive x ,y and z-axes are known as ------------

**Choices:**

○ Direction cosines

○ Direction ratios

◉ Direction angles

TIME LEFT **102**

**Calculus II (MTH301)**

Question: **34** (Marks: 1)    Attempted Questions: **33** Total Questions: **52**

If the spherical coordinates of a point are $\left(2, \frac{\pi}{4}, 0\right)$ , then z-coordinate in rectangular coordinate system is . . . . . .

**Choices:**

◉ 0

○ -2

○ 2

○ $\sqrt{2}$

TIME LEFT **101**

17

**Calculus II (MTH301)**

Question: **36** (Marks: 1)    Attempted Questions: **35**   Total Questions: **52**

Tthe direction of gradient at any point on the surface is . . . . . . . . . . . . . . . . to the tangent plane at that point.

**Choices:**

○ parallel

◉ perpendicular

○ opposite direction

○ None of these.

TIME LEFT
**100**

**Calculus II (MTH301)**

Question: **37** (Marks: 1)    Attempted Questions: **36**   Total Questions: **52**

Two surfaces are said to be orthogonal at the point of their intersection if their normals at that point are ----------

**Choices:**

○ Parallel

○ Perpendicular

○ In opposite direction

◉ Overlapping

TIME LEFT
**100**

Calculus II (MTH301)

| Question: 39 (Marks: 1) | Attempted Questions: 38 | Total Questions: 52 |
|---|---|---|

Let $x, y, z$ be the length, width and height of an open rectangular box. The surface area of the box will be . . . . . . . . . .

**Choices:**

$A = xy + 2yz + 2xz$

$A = yz + 4$

$A = xz + yz + zx$

$A = xyz$

TIME LEFT
99

Calculus II (MTH301)

| Question: 40 (Marks: 1) | Attempted Questions: 39 | Total Questions: 52 |
|---|---|---|

Double integral of a function $f(x, y)$ represents . . . . . . . . . of the region between the surface defined by the function and the plane which contains its domain.

**Choices:**

Perimeter

Volume

Area

Circumference

TIME LEFT
99

**Calculus II (MTH301)**

| Question: 42 (Marks: 2) | Attempted Questions: 40 | Total Questions: 52 |
|---|---|---|

Evaluate

$$\int_{-\pi}^{\pi} \sin nx \, dx$$

where n is an integer other than zero.

**Calculus II (MTH301)**

| Question: 43 (Marks: 2) | Attempted Questions: 40 | Total Questions: 52 |
|---|---|---|

Find Laplace Transform of the function $F(t)$ if $F(t) = t^4$

**Calculus II (MTH301)**

| Question: 45 (Marks: 3) | Attempted Questions: 40 | Total Questions: 52 |
|---|---|---|

Determine the fourier co-efficient $a_0$, of periodic function defined by
$f(x) = x$      $0 < x < 1$

**Calculus II (MTH301)**

| Question: 46 (Marks: 3) | Attempted Questions: 40 | Total Questions: 52 |
|---|---|---|

Find $curl \, \vec{F}$, if $\overline{F} = x^2 \hat{i} + 4xy^3 \hat{j} + y^2 x \hat{k}$

**Calculus II (MTH301)**

| Question: 48 (Marks: 3) | Attempted Questions: 40 | Total Questions: 52 |
|---|---|---|

Find the limit, if $(x, y)$ approaches to $(0, 0)$ along the line $y = x$

$$\lim_{(x, y) \to (0, 0)} \frac{4x^3 y}{2x^4 + 3y^4}$$

**Answer:**

**Calculus II (MTH301)**

| Question: 49 (Marks: 5) | Attempted Questions: 40 | Total Questions: 52 |
|---|---|---|

$$\int_c (x - y)\, dx + x\, dy$$

Evaluate the line integral along $y^2 = x$ from the point $(4, -2)$ to the point $(4, 2)$

**Calculus II (MTH301)**

| Question: 51 (Marks: 5) | Attempted Questions: 40 | Total Questions: 52 |
|---|---|---|

Determine whether the following vector field $\vec{F}$ is conservative or not.

$$\vec{F}(x, y, z) = x^2 z\, \hat{i} + y^2 x\, \hat{j} + (y + 2z)\, \hat{k}$$

**Answer:**

**Calculus II (MTH301)**

| Question: 52 (Marks: 5) | Attempted Questions: 40 | Total Questions: 52 |
|---|---|---|

Let $f(x, y) = x^2 y - y^2$ where $x = t^2$ and $y = 2t$. Use chain rule to find $\dfrac{df}{dt}$ and express the answer in variable t only.

Calculus II (MTH301)

Question: **5** (Marks: 1)　　　　Attempted Questions: **4** Total Questions: **52**

Is the following vector-valued function $\vec{r}(t)$ continuous at $t=1$? If not, why?

$$\vec{r}(t) = \left(\frac{t+1}{t-1}, \; t^2, \; 2t\right)$$

**Choices:**

○ $\vec{r}(t)$ is continuous at $t=1$

◉ $\vec{r}(1)$ is not defined

○ $\vec{r}(1)$ is defined but $\lim\limits_{t \to 1} \vec{r}(t)$ does not exist

○ $\vec{r}(1)$ is defined and $\lim\limits_{t \to 1} \vec{r}(t)$ exists but these two numbers are not equal.

TIME LEFT
**118**

Calculus II (MTH301)

Question: **8** (Marks: 1)　　　　Attempted Questions: **7** Total Questions: **52**

Which one of the following is correct Wallis Sine formula when $n$ is odd and $n \geq 3$?

**Choices:**

○ $\displaystyle\int_0^{\frac{\pi}{2}} \sin^n x \, dx = \frac{\pi}{2} \frac{(n-1)}{n} \frac{(n-3)}{(n-2)} \frac{(n-5)}{(n-4)} - - - - - - \frac{5}{6} \frac{3}{4} \frac{1}{2}$

○ $\displaystyle\int_0^{\frac{\pi}{2}} \sin^n x \, dx = \frac{\pi}{2} \frac{(n)}{(n-1)} \frac{(n-2)}{(n-3)} \frac{(n-4)}{(n-5)} - - - - - - \frac{6}{5} \frac{4}{3} \frac{2}{1}$

○ $\displaystyle\int_0^{\frac{\pi}{2}} \sin^n x \, dx = \frac{(n-1)}{n} \frac{(n-3)}{(n-2)} \frac{(n-5)}{(n-4)} - - - - - - \frac{6}{7} \frac{4}{5} \frac{2}{3}$

◉ $\displaystyle\int_0^{\frac{\pi}{2}} \sin^n x \, dx = \frac{(n)}{(n-1)} \frac{(n-2)}{(n-3)} \frac{(n-4)}{(n-5)} - - - - - - \frac{6}{5} \frac{4}{3} \frac{2}{1}$

TIME LEFT
**115**

**Calculus II  (MTH301)**

Question: **11**  (Marks: 1)  Attempted Questions: **11**  Total Questions: **52**

What is the amplitude of a periodic function defined by $f(x) = 4\sin 2x$ ?

**Choices:**

- 2
- 4
- 8
- 16

TIME LEFT
**113**

**Calculus II  (MTH301)**

Question: **14**  (Marks: 1)  Attempted Questions: **14**  Total Questions: **52**

What is the amplitude of a periodic function defined by $f(x) = 4\cos 3x$ ?

**Choices:**

- 1
- 3
- 4
- 12

TIME LEFT
**112**

**Calculus II (MTH301)**

What is the period of periodic function whose graph is as below?

**Choices:**

- ○ $\pi$
- ○ $-\pi$
- ○ $2\pi$
- ○ $-2\pi$

TIME LEFT
**111**

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**Calculus II (MTH301)**

The graph of an even function is symmetrical about ---------------

**Choices:**

- ○ x-axis
- ○ y-axis
- ○ origin

TIME LEFT
**111**

**Calculus II (MTH301)**

Question: 23 (Marks: 1)    Attempted Questions: 22    Total Questions: 52

What is Laplace transform of the function $F(t)$ if $F(t) = t$ ?

**Choices:**

○ $L\{t\} = \dfrac{1}{s}$

○ $L\{t\} = \dfrac{1}{s^2}$

◉ $L\{t\} = e^{-s}$

○ $L\{t\} = s$

TIME LEFT
**108**

**Calculus II (MTH301)**

Question: 26 (Marks: 1)    Attempted Questions: 25    Total Questions: 52

$$\int_c (xy)\,dx + (1 + y^2)\,dy$$

Evaluate the line integral                where C is the line segment from (1, 0) to (3, 0).

**Choices:**

○ -4

○ 0

◉ 4

○ Do not exist

TIME LEFT
**104**

**Calculus II (MTH301)**

Which of the following is true for a periodic function whose graph is as below?
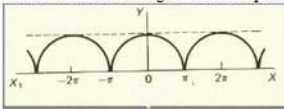
**Choices:**

Even function

Odd function

Neither even nor odd function

TIME LEFT
103

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**Calculus II (MTH301)**

The axis of symmetry of the parabola $y = -2x^2 + 4x + 1$ is . . . . . . . . . . .

**Choices:**

$x = 2$

$x = -1$

$x = 4$

$x = 1$

TIME LEFT
102

Calculus II (MTH301)

Question: **35** (Marks: 1)                    Attempted Questions: **34**    Total Questions: **52**

The function $f(x, y) = \sqrt{y - x}$ is continuous in the region -------- and discontinuous elsewhere.

Choices:

- $x \neq y$
- $x \leq y$
- $x > y$
- $x \geq y$

TIME LEFT
**101**

Calculus II (MTH301)

Question: **38** (Marks: 1)                    Attempted Questions: **37**    Total Questions: **52**

For a function to have a relative extremum at a point C, the point must be a . . . . . . . . . . .

Choices:

- Saddle point
- Critical point
- Negative point
- Stationary point

TIME LEFT
**100**

Calculus II (MTH301)

Question: 41   (Marks: 2)   Attempted Questions: 40   Total Questions: 52

Let the functions $P(x, y)$ and $Q(x, y)$ have continuous first partial derivatives inside and the boundary C of a region R in the xy-plane. State the condition when the line

$$\int_C (P\,dx + Q\,dy)$$

integral            is independent of path.

Answer:

Calculus II (MTH301)

Question: 44   (Marks: 2)   Attempted Questions: 40   Total Questions: 52

Find the domain of $f(x, y)$ where $f(x, y) = xe^{x^2 + 5xy + y^3}$

Calculus II (MTH301)

Question: 47   (Marks: 3)   Attempted Questions: 40   Total Questions: 52

Define the periodic function whose graph is shown below.

Calculus II (MTH301)

Question: 50   (Marks: 5)   Attempted Questions: 40   Total Questions: 52

Determine the fourier co-efficient $b_n$ of the following periodic function.

$f(x) = x$            $0 < x < 1$

# MTH301 Final Term Paper shared by Student

by Anjum Amjad on February 28, 2016 at 3:20pm

paper bohat asan tha 95% past paper me se tha except Laplace transform because wo lecture exclude h gaye thay

me ne Q bhi post krne the but mere sath bad luck hui bcz during my paper i have change 3 PCs bcz kisi ka mouse sahi nhi tha kisi ka keyboard saho kam nhi kerta tha bht mushkil se operate kya aur isi wajah se mere Q bhi Miss ho gaye

kuch Qs yad han wo share kr deta hon

double integral tha with limits asan tha but I miss due to above reason

divergent vector me se tha 2 Q thay

curl vector se bhi tha 2 Q thay

critical point ka bhi 1 Q tha

arc length se bhi 2 Q thay

1 parabola ka tha symmtry btani thi

please mujhe koi btae k Complain kis ko krni ha head office me email address btaen.?

bcz jo mere sath hua wo kisi aur k sath na ho my campus is VLHR01

# MTH301 Final Term Paper shared by Student

on February 29, 2016 at 11:17pm

40 to 50% paper, from past papers.
graph say related questions b thay MCQS main aur subjective main b.
So don't rely on only past papers....Best of Luck.

paper bohat asan tha 95% past paper me se tha except Laplace transform because wo lecture exclude h gaye thay
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# MTH301 Final Term Paper shared by Student

Q1. Find Laplace transform
(2 marks)
$$F(t) = \sin 2t$$

Q2 Wallis Sine theorem
(2 marks)
$$\int_0^{\frac{\pi}{2}} \sin^5 x \, dx$$

Q3 Find a.b
(2 marks)
$$a = 3 - 2\hat{j} + \hat{k}$$
$$b = 4\hat{i} + 5\hat{j} - 2\hat{k}$$

Q4 Give Equation of Curve
(2 marks)
$$x = 3x$$
$$y = 3x^2$$
For which values
of y these curves
intersect each other.

Q5 Find Laplace Transform
(3 marks) $F(t) = e^{it} \sin 3t$

Q6 $g = f(x)$
(3 marks) $x = x(r, s)$
Chain Rule for $\frac{\partial}{\partial r}$, $\frac{\partial g}{\partial s}$

Note :: Some Mistakes but

$9 \, 8\%$ same paper

$+ 9 \, 8\%$ plus

**Q 7**
(3 marks)

Arc length of the curve

$$\vec{r}(t) = a\cos t\,\hat{i} + a\sin t\,\hat{j}$$

when $0 \leq ?? \leq \pi$

**Q 8**
(3 marks)

$$\int_0^{\frac{\pi}{2}} (\sin^3 x + \sin^4 x)\, x)$$

**Q 9**
(5 marks)

$$\int_C V(\vec{r})\, dt$$

$$V(x,y,z) = xyz$$

Over curve given by

$$\vec{r}(t) = 3t^2\,\hat{i} + t\,\hat{j} + t^4\,\hat{k}$$

$$0 < t <$$

**Q 10**
(5 marks)

$$\int_C y\,dx + (x+y)\,dy$$

along $y = x^2 + 2x$

From the point $(0,0)$ to the point $(2,8)$

I MAYBE WRONG

But mostly I am correct 97%

# Q 11

(5 marks) $f(x,y) = \dfrac{\sin x}{y}$

$x = S^2 \cdot t$

$y = S + e^t$

Find $\dfrac{\partial f}{\partial S}$

Simplifying as function of $S$ and $t$

---

# Q 12 Fourier cofficient $b_n$ of Periodic Function

(5 marks)

$f(x) = x$

$0 < x < 1$

# MTH301 Final Term Paper shared by Student

mohsen eman on August 26, 2014 at 11:30pm

THIS IS PAPER OF M.TARIQ BHAI.VERY OLD SHARE (from 2011)

BUT REALLLY AWSOME HERE:

Mth301 Calculus 2
11-feb-2012 Paper

Q1.Evalute the double integral

Q2. Check whether the function has relative minima or relative maxima

Yaha per sub kuch diya gaya hai jese  bus hame equate ker k maloom kerna hai kya hai ye either maxima or minama

Q3.find the curl of the vector function examples of page 174 handout

　　　Lecture 34.

Q4. Line integral se aik question aaya tha lecture 31 page 159,160 handout

Q5.wallis sine formula

Q6 periods se question bohat saray the.

Q7.check whether the function is even or odd

Q8. find the limit of the function of 3 variable xyz

Q9. r(t)= (cost)i+(sint)j+2k 0<=t<=2pi

Mcqs

1. Lecture 27 k saray graph hai wo sub k graph or equations yad ker le us me se mere 3 4 mcqs aaye the sirf graph select kerna tha ya graph diya gaya tha equation select kerni thi
2. is that exact differential or not true or false tha

3. Periods se 8 10 mcqs aaye the hame ye select kerna tha k
   iski equation kya hogi jo image di gae hai uska amplitude kya hai,
   uska uska period kya hai yani is tarah se question aaye the
4. fourier series se mcqs aaye the
5. check where function is even or odd
6. laplace correction se 2 mcqs aaye the
7. wallis sine formula se 2 mcqs aaye the

# MTH301 Final Term Paper shared by Student

mohsen eman on August 30, 2014 at 1:16am

Dera ghazi khan

28 august 8:00

Subjective

First 4 questions of 2 marks

1 was about laplace teorem

2 was I think about laplace theorem

3 was to evaluate integral.also something about line segment was written

4 was to use wallis theorem

Then 4 questions of 3 marks

1.Find new integral after order is changed

2.F(t)= e^2t sin 3t then find laplace

3.Is this exact or not.dont remember what

4.Question about curl.

Then 4 questions of 5 marks

1.fourier series

2.also fourier series

3.chain rule

4.Evaluate integral

# MTH301 Final Term Paper shared by Student

mohsen eman on August 30, 2014 at 1:23am

ALSO

MCQs TOTAL WERE 40

There were 4 graph questions

A question of odd function

There were 3 about Laplace transform

And 2 about Laplace inverse transform

1 about  domain

1 coordinate related

1 octant related

If f(x) = so and so then so and so

1 was about disk equation

Equation related to who?euler, gausis,laplace or strokes

1 about derivative

1 about absolute extrema

1 about doubal integral

3 on polar equation (radius,angle)

1 was about integral of sum of partial derivatives

1 was about vectors

1was for defining integral of partiall derivative

Derivative was given find vector value function such that function is continuous

Derivative of vector value function

Find integral

Integral of circular path

When is vector field value constant

I think one was to find line integral of a scalar with respect to vector

1 was about wallis sine

Hope these suffic for you J

# MTH301 Final Term Paper shared by Student
## MTH301 – Calculus 2
## Fall 2012 Final term Current Paper
## 03/Feb/2012

**Total 52**
**40 mcqs**
**12 questions**

**Question No: 01**

Prove whether the following function is even, odd or neither.

$f(x) = x^3 + 4x$

**Question No: 02**

Find $curl \vec{F}$, if $\vec{F} = (3x+y)\hat{i} + xy^2z\,\hat{j} + (xz^2)\hat{k}$

**Question No: 03**

Determine the fourier co-efficient $a_0$ of the following function.

$f(x) = x^2 \qquad 0 < x < 2\pi$

**Question No: 04**

$$\int_C \frac{1}{1+x}\,ds, \qquad\qquad x = t,\; y = \frac{2}{3}t^{\frac{3}{2}},\; 0 \le t \le 3$$

Compute where C is the curve

**Question No: 05**

$$\oint_C \vec{F}\,d\vec{r},$$

Use Stokes theorem to evaluate the integral

$where\; \vec{F} = 2z\,\hat{i} + 3x\,\hat{j} + 5y\,\hat{k},\; C\; is\; the\; circle\; x^2 + y^2 = 1$

In the xy-plane with counter clockwise orientation looking down the positive z-axis.

**Question No: 06**

Given $\vec{F} = x^2\hat{i} - 2\hat{j} + yz\,\hat{k}$ .Find div(Curl $\vec{F}$ ).

**Question No: 07**

Determine the Fourier coefficients $a_0, a_n\; and\; b_n$ for a periodic function of period $2\pi$ defined by

$$f(x) = \begin{cases} -x & -\pi \le x < 0 \\ 0 & 0 \le x < \pi \end{cases}$$

**Question No: 08**

$$\left( \sqrt{3}, \frac{\pi}{3}, \frac{\pi}{2} \right)$$

Consider the point _____ in spherical coordinate system. Find the rectangular coordinatesof this point.

**Baki question ziyada tar Periodic equation se aye the is k ilawa parametric equation or wallis formula or fourier series se aye the or 1 do the baki MCQs toh sab new the koi bhi past paper se nahi aya tha!**

# MTH301 Final Term Paper shared by Student

on February 11, 2012 at 10:46pm

Mth301 Calculus 2
11-feb-2012 Paper

Q1.Evalute the double integral

Q2. Check whether the function has relative minima or relative maxima

Yaha per sub kuch diya gaya hai jese bus hame equate ker k maloom kerna hai kya hai ye either maxima or minama

Q3.find the curl of the vector function examples of page 174 handout

Lecture 34.

Q4. Line integral se aik question aaya tha lecture 31 page 159,160 handout

Q5.wallis sine formula

Q6 periods se question bohat saray the.

Q7.check whether the function is even or odd

Q8. find the limit of the function of 3 variable xyz

Q9. r(t)= (cost)i+(sint)j+2k 0<=t<=2pi

Mcqs

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2. is that exact differential or not true or false tha
3. Periods se 8 10 mcqs aaye the hame ye select kerna tha k
   iski equation kya hogi jo image di gae hai uska amplitude kya hai,
   uska uska period kya hai yani is tarah se question aaye the
4. fourier series se mcqs aaye the
5. check where function is even or odd
6. laplace correction se 2 mcqs aaye the
7. wallis sine formula se 2 mcqs aaye the

# MTH301 Final Term Paper 2012 shared by Student

Q1.Evalute the double integral $\int\int f(x)dxdy$

Q2. Check whether the function has relative minima or relative maxima

Yaha per sub kuch diya gaya hai jese $f_{xx}$ $f_{yy}$ $f_{xy}$ $f_{yx}$ bus hame equate ker k maloom kerna hai kya hai ye either maxima or minama

Q3.find the curl of the vector function examples of page 174 handout

Lecture 34.

Q4. Line integral se aik question aaya tha lecture 31 page 159,160 handout

Q5.wallis sine formula $\int \sin^6 xdx$

Q6 periods se question bohat saray the.

Q7.check whether the function is even or odd

Q8. find the limit of the function of 3 variable xyz

Q9. r(t)= (cost)i+(sint)j+2k 0<=t<=2pi

# Mcqs

1. Lecture 27 k saray graph hai wo sub k graph or equations yad ker le us me se mere 3 4 mcqs aaye the sirf graph select kerna tha ya graph diya gaya tha equation select kerni thi
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5. check where function is even or odd
6. laplace correction se 2 mcqs aaye the
7. wallis sine formula se 2 mcqs aaye the