VIRTUAL UNIVERSITY OF PAKISTAN

A Good Education is a Foundation For a Better Future
CORRECT ANSWER SOLVED BY HADI
EMAIL:hadirajputofficial@gmail.com
WHATSAPP& CALL:03087122922
TEAM HADI(VU LAHORE)

MID TERM PAST PAPER

We Deal All Kind of VU Project
(PHP, .NET,ANDROID,PYTHON)

MADE AND SOLVED BY HADI

WARNING: Team HADI is not responsible for any mistake or wrong answer. All students reading and using this document may check and confirm the answers at their own.

WhatsApp:03087122922

FACEBOOK ID: https://www.facebook.com/hadipastpapers/

Best of luck!

PAST PAPER

Question No : 1 of 26 Marks: 1 (Budgeted Time 1 Min)

Wronskian of the function $y_c = c_1 + c_2 \cos x + c_3 \sin x$ is

Answer (Please select your correct option)

- 0
- 1 ⇦ correct answer solve by hadi
- 2
- 3

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 2 of 26 Marks: 1 (Budgeted Time 1 Min)

The value of amplitude in the solution X=40Sin (7t+4) is

Answer (Please select your correct option)

- 7
- 4
- 40
- 20



correct answer solve
by hadi

MADE BY HADI

TEAM HADI(VU)

Question No : 3 of 26 Marks: 1 (Budgeted Time 1 Min)

The degree of the differential equation $[1 - x(\frac{dy}{dx})^2]^{\frac{3}{2}} = \frac{d^2y}{dx^2}$ is

Answer (Please select your correct option)

- 1
- 2
- 3
- None of these



correct answer solve
by hadi

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 4 of 26 Marks: 1 (Budgeted Time 1 Min)

Which of the following is the equation of pendulum?

Answer (Please select your correct option)

- $\frac{d^2\theta}{dt^2} + \frac{g}{l}\sin\theta = F(t)$ ⇦ correct answer solve by hadi
- $\frac{d\theta}{dt} + \frac{g}{l}\sin\theta = F(t)$
- $\frac{du}{dt} = F(u)G(t)$
- None of these

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 5 of 26 Marks: 1 (Budgeted Time 1 Min)

The differential equation $(x^2 - 2x + 2y^2)\,dx + 2xy\,dy = 0$ is a/an -----differential equation.

Answer (Please select your correct option)

- Exact
- Non-exact
- Homogenous
- Separable



correct answer solve
by hadi

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 6 of 26 Marks: 1 (Budgeted Time 1 Min)

In a Bernoulli equation $\frac{dy}{dx}+\frac{1}{x}y = xy^2$, *identify* $p(x), q(x)$ & n respectively.

Answer (Please select your correct option)

- $\frac{1}{x}, x$ & 2 ⇦ correct answer solve by hadi
- y, x^2y & 2
- $y, \frac{1}{x}$ & 2
- $\frac{1}{y}, y$ & 2

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 7 of 26 Marks: 1 (Budgeted Time 1 Min)

If a differential equation is of the form $y\,f(x,y)dx + xg(x,y)\,dy = 0$ with $xM - yN \neq 0$, then the Integrating factor is------.

Answer (Please select your correct option)

- $\mu = \frac{1}{yN - xM}$
- $\mu = \frac{1}{xM + yN}$
- $\mu = \frac{1}{xM - yN}$ ⇦
- $\mu = \frac{1}{yM + xN}$

correct answer solve
by hadi

TEAM HADI(VU)

MADE BY HADI

Email:hadiraiputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 8 of 26 Marks: 1 (Budgeted Time 1 Min)

If the given differential equation is homogeneous and $xM + yN \neq 0$, then the integrating factor of the given differential equation is given by------.

Answer (Please select your correct option)

- $u = \frac{1}{xM + yN}$ ⇦ correct answer solve by hadi
- $u = \frac{1}{xM - yN}$
- $u = \exp\left(\int \frac{\frac{\partial N}{\partial x} - \frac{\partial M}{\partial y}}{\quad} dy\right)$
- $u = \exp\left(\int \frac{\frac{\partial M}{\partial y} - \frac{\partial N}{\partial x}}{\quad} dx\right)$

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 9 of 26 Marks: 1 (Budgeted Time 1 Min)

Number of constant solutions obtained from the separable differential equation $\frac{dy}{dx} = \frac{y^3 - 1}{x}$ is---.

Answer (Please select your correct option)

- 0 ⇦ correct answer solve by hadi
- 1
- 2
- 3

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 10 of 26 Marks: 1 (Budgeted Time 1 Min)

If $\frac{dy}{dx} = x$, *then* $y =$.....

Answer (Please select your correct option)

- $y = \frac{x^2}{2} + c$ ⇦ correct answer solve by hadi
- $y = x^2 + c$
- $y = x + c$
- $y = \frac{x}{2} + c$

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 11 of 26 Marks: 1 (Budgeted Time 1 Min)

To convert the non-homogenous differential equation $\frac{dy}{dx} = \frac{2x+3y-4}{4x+6y+9}$ into variable separable form, we use the substitution -----.

Answer (Please select your correct option)

- $Z = x + y$
- $Z = 4x + 3y$
- $Z = 2x + 6y$
- $Z = 2x + 3y$ ⇦ correct answ by hadi

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 12 of 26 Marks: 1 (Budgeted Time 1 Min)

In exponential model for the population growth $P(t) = P_0 e^{kt}$ *If* $k < 0$, *then* $\lim_{t \to \infty} P(t) = - - -$.

Answer (Please select your correct option)

- ∞
- 0 ⇦ correct answer solve by hadi
- −∞
- 1

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 13 of 26 Marks: 1 (Budgeted Time 1 Min)

In exponential model for the population growth $P(t) = P_0 e^{kt}$ *If* $k > 0$, *then* $\lim_{t \to \infty} P(t) = - - -$.

Answer (Please select your correct option)

- ∞ ⇦ correct answer solve by hadi
- $-\infty$
- 0
- 1

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 14 of 26 Marks: 1 (Budgeted Time 1 Min)

The constant solutions of the logistic equation $\frac{dP}{dt} = P(a - bP)$ are----.

Answer (Please select your correct option)

- P=0, P= b/a
- P=0, P=a/b ⇦ correct answer solve by hadi
- P=a/b, P=b/a
- P=0,P=0

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 15 of 26 Marks: 1 (Budgeted Time 1 Min)

If $f(x)$ and $g(x)$ are linearly dependent on I, then-----.

Answer (Please select your correct option)

- $W(f,g)(x) \neq 0$ (Wronskian) for all x in the interval I.
- $W(f,g)(x) = 0$ (Wronskian) for all x in the interval I.
- $W(f,g)(x)$ *may or may not be* zero for all x in the interval I.
- $W(f,g)(x)$ is not defined for all x in the interval I.



correct answer solve
by hadi

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 16 of 26 Marks: 1 (Budgeted Time 1 Min)

What is annihilator operator of the function $g(x) = \sin x$?

Answer (Please select your correct option)

- $(D^3 + 1)$
- D^2
- $D^2 - 1$
- $D^2 + 1$ ⇦

TEAM HADI(VU)

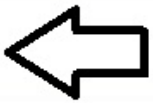
MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 17 of 26 Marks: 1 (Budgeted Time 1 Min)

Which of the following is the annihilator operator of the function $g(x) = 4x - 5$?

Answer (Please select your correct option)

- D^2 
- $(D+4)$
- (D^3-4)
- $(D-4)$

correct answer solve
by hadi

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 18 of 26 Marks: 1 (Budgeted Time 1 Min)

The differential equation of the orthogonal trajectory to the family of curves $y = cx$ is-----.

Answer (Please select your correct option)

- $\frac{dy}{dx} = -\frac{x}{y}$
- $\frac{dy}{dx} = \frac{x}{y}$
- $\frac{dy}{dx} = -\frac{y}{x}$
- $\frac{dy}{dx} = \frac{y}{x}$



correct answer solve by hadi

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 19 of 26 Marks: 1 (Budgeted Time 1 Min)

If $y = 1 + 6x^2 - 7x^3$, then which of the following is true for it ?

Answer (Please select your correct option)

- Its annihilator operator is D.
- Its annihilator operator is D^2.
- Its annihilator operator is D^3.
- Its annihilator operator is D^4.



correct answer solve by hadi

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 20 of 26 Marks: 1 (Budgeted Time 1 Min)

If $y_1 = x^2$ and $y_2 = x$ are the first and second solution of $x^2\frac{d^2y}{dx^2} - 2x\frac{dy}{dx} + 2y = 0$, then which of the following is the most accurate option?

Answer (Please select your correct option)

- $W(y_1, y_2)$ must be equal to zero on the indicated interval.
- $W(y_1, y_2)$ must be equal to non-zero on the indicated interval.
- $W(y_1, y_2)$ may or may not be equal to zero on the indicated interval.
- $W(y_1, y_2)$ may or may not be equal to non-zero on the indicated interval.

correct answer solve
by hadi

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 21 of 26 Marks: 2 (Budgeted Time 4 Min)

In which sciences or subjects Logistic equations are useful?

Answer (Please click here to Add Answer)

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 22 of 26 Marks: 2 (Budgeted Time 4 Min)

Define cycle of a vibrating body?

Answer (Please click here to Add Answer)

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 23 of 26 Marks: 3 (Budgeted Time 6 Min)

What is Logistic equation, write it mathematically?

Answer (Please click here to Add Answer)

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 24 of 26 Marks: 3 (Budgeted Time 6 Min)

Write the solution $x(t) = c_1 \cos \omega t + c_2 \sin \omega t$ of a simple harmonic motion in a simple alternative form?

Answer (Please click here to Add Answer)

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 25 of 26 Marks: 5 (Budgeted Time 10 Min)

Find the general solution of the following non-homogenous differential equation using annihilator operator

$y'' - 3y' + 2y = 4x^2 + 5$?

Answer (Please click here to Add Answer)

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)

Question No : 26 of 26 Marks: 5 (Budgeted Time 10 Min)

Given that $y = c_1 e^{x} + c_2 e^{-x}$ is a two parameter family of solutions of the differential equation $\frac{d^2y}{dx^2} - y = 0$ on $(-\infty, \infty)$ find a member of the family satisfying the boundary conditions

$y(0) = 0,\ y'(1) = 1$

Answer (Please click here to Add Answer)

TEAM HADI(VU)

MADE BY HADI

Email:hadirajputofficial@gmail.comWhatsapp:03087122922(Team Hadi Lahore)



HADI VU PAST PAPER

WE DEAL ALL KIND OF VU PROJECT
(PHP,ANDROID,PYTHON)

DEAR STUDENTS

ARE YOU LOOKING
FOR ASSISTANCE

1) ASSIGNMENTS
2) QUIZZES
3) GDB
4) GRAND QUIZZES

We Provide,You Solution of VU Academic Activities include Assignments, Quizzes,GDBs,Grand Quizze If You Need Help in Services Kindly inform us.

TEAM HADI
(VU LAHORE)

TEAM HADI
(VU LAHORE)

HADI TECH

#PAID_TASK

CONTACT US

CALL & WHATSAPP

0308-7122922