QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHA

FINAL SEMESTER REGULAR EXAMINATION OF SECOND SEMESTER – FIRST YEAR 2021 OF 20-BATCH, B.E (

SUBJECT: ISLAMIC STUDIES

Dated: 16.12.2021 Maximum Marks: 30 Time Allowed: 02

NOTE: ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. 01 What are the aspects of oneness of ALLAH? Describe the Shirk and its aspects.

Q. 02 What did Prophet (S.A.W) say about women's rights in his last sermon?

Q. 03 Explain the evolutionary theory about the beginning of religion and describe any three distinguishing characteristics of Islam.

Be Tolerant – Say No To Extremism

QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

FINAL SEMESTER REGULAR EXAMINATION OF SECOND SEMESTER – FIRST YEAR 2021 OF 20 MATCH (UE/ME)

SUBJECT: DIFFERENTIAL EQUATIONS

Dated: 09.12.2021 Maximum Marks: 60 Time Allowed: 3 Hours.

NOTE: ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. No		CLO	Taxonomy Level	Marks
01(a)	Solve the given Riccati equation $\frac{dy}{dx} = \sec^2 x - \tan(x)\,y + y^2, \quad y_1 = \tan x.$	1	C3	06
01(b)	Find the orthogonal trajectories of the family of curves $y = \ln(\tan x + c_1).$	1	C3	06
02(a)	If $y_1 = x^2 + x^{-1}$ is a given solution of $x^2y'' - 4xy' + 6y = 0$ then find the second solution by use of reduction of order or formula.	1	C3	06
02(b)	Solve the initial value problem $\frac{d^2x}{dt^2} + \omega^2 x = F_0 \cos \beta t, \quad x(0) = 0 \text{ and } x'(0) = 0.$	1	C3	06
03	Solve the given differential equation subject to the indicated initial conditions: $x^2y'' - 4xy' + 6y = \ln x^2, \quad y(0) = y'(0) = 0.$	1	C3	12
04(a)	Define Partial differential equation and form the differential equation by eliminating the arbitrary function $z = xy + f(x^2 + y^2).$	2	C3	06
04(b)	Solve the given partial differential equation by direct method $\frac{\partial^3 u}{\partial x^2 \partial y} + 18xy^2 + \sin(2x - y) = 0.$	2	C3	06
05	Find the meaning full solution (if possible) of $\frac{\partial^2 u}{\partial x^2} = \frac{\partial^2 u}{\partial t^2} + 2\frac{\partial u}{\partial t}$	2	C3	12

—The End—

QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

FINAL SEMESTER REGULAR EXAMINATION OF SECOND SEMESTER – FIRST YEAR 2021 OF 20 BATCH B.E (M

SUBJECT: ENGINEERING DRAWING & GRAPHICS

Dated: 13.12.2021 Maximum Marks: 30 Time Allowed: 02 H

NOTE: ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. No.		QUESTION	CLO	Taxonomy Level
Q. 01	(a)	Define the following terms with sketching: i. Types of Lines ii. Instruments uses	2	C3
	(b)	Draw the following symbols are used in pipe fitting lines: 1. Gate Valve 2. Elbow 45° 3. Coupling 4. Y bend 45° 5. Cross 6. Cap and Elbow 90° 7. Globe Valve 8. Reducer 9. Plug 10. Union	2	C3
	(c)	To draw in involute of a given circle diameter D=2cm.	2	C3
Q. 02	(a)	The front view of a line $\overline{AB}$ inclined at 40° to the V.P is 70mm long. Draw the projection of a line it is parallel to and 50mm above the H.P its one end being 35mm in front of the V.P.	2	C3
	(b)	Draw the three views of hexagonal nut take diameter D=5cm.	2	C3
Q. 03		A rectangular plain surface of size 75mm and 40mm is positioned in the first quadrant and inclined at an angle of 60° with the H.P and 30° with the V.P. Draw its projection.	2	C3

Good Luck

QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

FINAL SEMESTER REGULAR EXAMINATION OF SECOND SEMESTER – FIRST YEAR 2021 OF 20 BATCH B.E (ME)

SUBJECT: ENGINEERING DYNAMICS

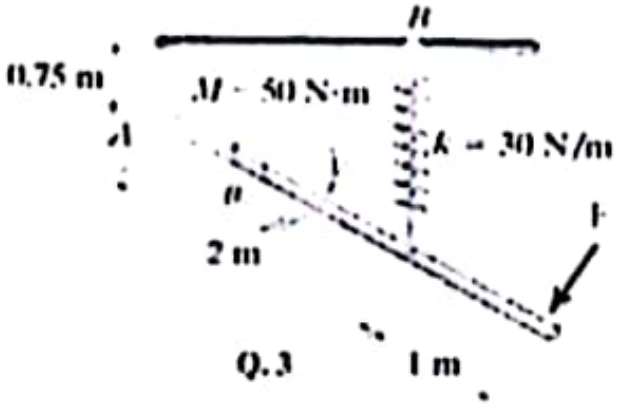
Dated: 06.12.2021 | Maximum Marks: 30 | Time Allowed: 2 Hours

NOTE: ATTEMPT ALL QUESTIONS. ALL QUESTION CARRY EQUAL MARKS.

Q No.		Description	Marks	CLO
01	(a)	Explain the planer motion of rigid body in planer kinematics	3	1
	(b)	A pinion of 12inch diameter drives gear of 36inch diameter, which is attached to the hoisting drum of 48 inch diameter. The load L is lifted from its rest position and acquires an upward velocity of 30 fee/sec in a vertical rise of 40ft with constant acceleration. As the load passes through the position, Calculate (1) the acceleration of drum at point C (2) the angular velocity of the pinion.	7	2
02	(a)	Develop the equation for rate of change of angular momentum ($\dot{H}_O$)	3	1
	(b)	The pickup truck weighs 3220pound and reaches a speed of 44ft/sec from rest in a distance of 200ft up the 10 percent incline with constant acceleration. Calculate the normal force under each pair of wheels and the frictional force under the rear driving wheels. The effective coefficient of friction between the tires and the road is 0.80.	6	2
03		A spring lever mechanism as shown in Figure, has a mass of 10kg and is subjected to a couple moment of 50Nm. A force F *(10 times of your roll number)*N is applied at the end of lever. The spring has an unstached length of 0.5m and remains in the vertical position due to the roller guide at point B. Determine the total work done by all the forces acting on the bar when it has rotated downward from $\theta = 0$ to 90°.	10	2

Q. 1(b)

Q. 2(b)



Q. 3

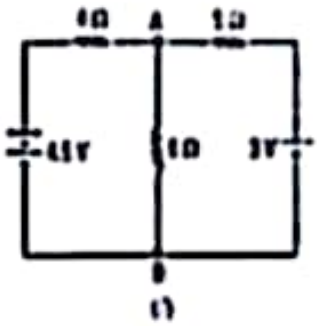
QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

FINAL [illegible] REGULAR EXAMINATION SECOND SEMESTER-FIRST YEAR 2020 BATCH B.E (ME)

SUBJECT ELECTRICAL ENGINEERING

Dated 20.12.2021 Maximum Marks: 30 Time Allowed 02 Hours

NOTE: ATTEMPT ALL QUESTIONS ALL QUESTIONS CARRY EQUAL MARKS

Q. No	QUESTIONS	CLO	Taxonomy Level	Marks
01 (a)	State and Explain DC Thevenin's Theorem and Also write Procedure for finding Thevenin Equivalent Circuit	1	1	05
01(b)	Using Thevenin's theorem, find the current in 6 Ω resistor in Fig. (1) 	2	3	05
02 (a)	Why transformer rating in KVA? Explain in detail Efficiency of a Transformer.	1	1	05
02 (b)	State and explain different types of D.C generators.	1	1	05
03 (a)	Enlist types of DC motor and also Describe Characteristics of D.C motors.	2	2	05
03 (b)	Calculate the emf Generated by 4 pole wave wound generator having 70 slots with 12 conductors per slot when driven at 1400 r.p.m. The flux per pole is 0.02Wb	2	2	05

Good Luck

QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

FINAL SEMESTER REGULAR EXAMINATION OF SECOND SEMESTER – FIRST YEAR, 2021 OF 20 BATCH, B.E (ME)

SUBJECT: COMMUNICATION SKILLS

Dated: 03.12.2021 Maximum Marks: 30 Time Allowed: 02 Hours.

NOTE: ATTEMPT ALL QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. 01 Find out the barriers from the given situations, and discuss in detail: point out the barriers, explain those barriers according to the situation, and define cautions need to be exercised as barriers to communication. *07*

(a) Discuss either (i) or (ii)

(i) Which sort of obstacles in communication can be occurred near construction work, where you are supposed to demonstrate the procedure of operating machines with other engineers, and the engineers are belonging from different fields of engineering and positions.

OR

(ii) You are selected for master's degree in foreign on scholarship like in Korea or Japan, which sort of problems could hampered the growth of communication you would face there. Briefly discuss the barriers by idealizing such situation.

(b) Mention any three barriers you are facing right now. *03*

Q. 02 What is the importance of non-verbal communication? What are such gestures which should be avoid in formal public speaking? *10*

Q. 03 The given questions are mostly asked in interviews. Discuss the reasons behind asking such questions by interviewee and how an interviewer should answer in appropriate way? *10*

1) Introduce your self.
2) What do you know about our company?
3) What are your weakness?

Good Luck

QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSH

MID-SEMESTER EXAMINATION OF SECOND SEMESTER – FIRST YEAR (2ND SEMESTER), 20 BATCH, B.E (ME)

SUBJECT: ISLAMIC STUDIES

Dated: 15.10.2021 Maximum Marks: 10 Time Allowed: 45 M

NOTE: ATTEMPT ANY TWO (02) QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. 01 Define the importance of moral values and write short note on any three of the followings:

i. Truthfulness
ii. Honesty
iii. Cleanliness
iv. Avoiding extravagance and misery in spending wealth

. 02 Discuss the right of protection to wealth and right of liberty to religion of Non-Muslims.

. 03 Elaborate the life profile of Hazrat Muhammad S.A.W.

The End

QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

MID-SEMESTER EXAMINATION OF SECOND SEMESTER – FIRST YEAR (2nd SEMESTER) 20 BATCH, B.E (ME)

SUBJECT: ENGINEERING DRAWING & GRAPHICS

Dated: 14.10.2021 Maximum Marks: 10 Time Allowed: 45 Minutes.

NOTE: ATTEMPT ANY TWO (02) QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q. 01 (a) Draw the projection of the following points on the same ground line, keeping the projections 30mm a part:

i. The point F is in the HP and 30mm behind the VP

ii. A point G is 40mm above the HP and 25mm in front of VP

iii. A point H is in the VP and 30mm above the HP

iv. A point I is 45mm below the HP and 35mm behind the VP

v. A point J is 25mm above the HP and 35 mm behind the VP

(b) Draw the projections of 100mm long straight line in the following positions:

i. Perpendicular to the HP 30mm in front of the VP and its one end 20mm above the HP

ii. Perpendicular to the VP 20mm above the HP and in the VP

iii. Perpendicular to the HP in the VP and its one end is in the HP.

Q. 02 (a) Draw the elevation and plan of snap head rivet. Take D=2.5cm and Length l=7.5cm.

(b) Define the following terms with sketches:

i. Types of lines

ii. Projector and projection

Q. 03 The front view of A line $\overline{PQ}$ inclined at 40° to the VP is 60mm long. Draw the projections of a line when it is parallel to and 35mm above the HP. Its one end being 25mm in front of the VP.

The End

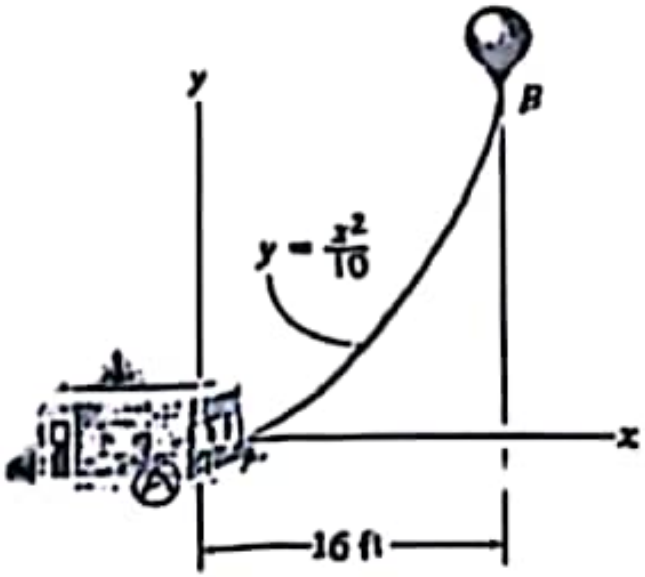
QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

MID-SEMESTER EXAMINATION OF SECOND SEMESTER-FIRST YEAR OF 20-BATCH, B.E (ME)

SUBJECT: ENGINEERING DYNAMICS

Dated: 11.10.2021 | Maximum Marks: 10 | Time Allowed: 45 Minutes

NOTE: ATTEMPT ANY TWO QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

Q No.		Description	Marks	CLO
01	(a)	Define the kinematics and kinetics of particles.	2	1
	(b)	The car moves in a straight line such that for a short time its velocity is defined by $v = (3t^2 + 2t)$ *ft/sec*, where t is in seconds. Determine its position, when $t = 3$ sec. 	3	2
02	(a)	Describe the rectilinear motion of particle with any suitable example.	2	1
	(b)	A small projectile is fired vertically downward into a fluid medium with an initial velocity of 60 m/s. Due to the drag resistance of the fluid the projectile experiences a deceleration of $a = (-0.4v^3)$ m/s^2, where v is in m/s. Determine the projectile's velocity, 4 sec after it is fired.	3	2
03		At any instant the horizontal position of the weather balloon is defined by $x = (8t)$ ft, where t is in seconds. If the equation of the path is $y = x^2/10$, determine the magnitude and direction of the velocity and the acceleration when $t = 2$ sec. 	5	2

Good Luck

QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCE AND TECHNOLOGY, NAWABSHAH

MID SEMESTER EXAMINATION 2021 OF SECOND SEMESTER FIRST YEAR (20-BATCH) OF B.E. (MECHANICAL ENGINEERING)

Subject: DIFFERENTIAL EQUATIONS

Dated: 13-10-2021 **Time Allowed: 1 Hour (3 C.H)** **Max: Marks: 20**

NOTE: ATTEMPT ANY TWO QUESTIONS.

Q. No		CLO	Taxonomy Level	Marks
01(a)	Define differential equation, order of the differential equation and linear and nonlinear differential equation.	2	C2	05
01(b)	Show that $y = \frac{1+ce^{2x}}{1-ce^{2x}}$ is a solutions of $\dot{y} = y^2 - 1$ and determine a singular solution of the differential equation.	2	C2	05
02(a)	Solve $x^2\frac{dy}{dx} = y - xy,\ y(-1) = -1$ by separation of variables.	2	C2	05
02(b)	Suppose $M(x,y)dx + N(x,y)dy = 0$ is a homogeneous equation. Show that the substitution $x = vy$ reduces the equation to one with separable variables.	2	C2	05
03(a)	Find the value of k so that the given differential equation is exact $(6xy^3 + cosy)dx + (kx^2y^2 - xsiny)dy = 0.$	3	C3	05
03(b)	Solve the linear differential equation $cos^2x\frac{dy}{dx} + y = 1,\ y(0) = -3.$	3	C3	05

—The End—

QUAID-E-AWAM UNIVERSITY OF ENGINEERING, SCIENCE & TECHNOLOGY, NAWABSHAH

MID-SEMESTER EXAMINATION OF SECOND SEMESTER – FIRST YEAR (2nd SEMESTER) 20-BATCH, B.E (ME)

SUBJECT: COMMUNICATION SKILLS

Dated: 12.10.2021 Maximum Marks: 10 Time Allowed: 45 Minutes.

NOTE: ATTEMPT ANY TWO (02) QUESTIONS. ALL QUESTIONS CARRY EQUAL MARKS.

01 Why the process of communication is important to study? Discuss the final link in the process of communication.

02 Communication Skills is like an oxygen for engineers. Discuss in detail any 5 goals of communications skills according to engineer's life.

03 Why 7 C's are important to learn; read the given passage, mention the missing c's if you find any along with discussion then write a good example of it.

Yasir,

I wanted to touch-base with you that I don't appreciate how your team always monopolizes the discussion at our weakly meetings. I also sent you an email for next week meeting and my birthday party invitation. I have a lot of projects, and I really need time to get my team's progress discussed as well. So far, thanks to your department, I haven't been able to do that. Can you make sure they make time four me and my team next weak?

Thanks,

Phil

The End

QUAID-E-AWAM UNIVERSITY OF ENGINEERING SCIENCE AND TECHNOLOGY, NAWABSHAH

MID SEMESTER EXAMINATION 2021 OF SECOND SEMESTER FIRST YEAR (20-BATCH) OF B.E. (MECHANICAL ENGINEERING)

Subject: ELECTRICAL ENGINEERING

Dated: 16-10-2021 Time Allowed: 45 minutes Max: Marks: 10

NOTE: ATTEMPT ANY TWO QUESTIONS, ALL QUESTIONS CARRY EQUAL MARKS.

Q. No	QUESTIONS	CLO	Taxonomy Level	Marks
01 (a)	Define D.C circuit and also derive an expression when three resistors are connected in series. Also write the main characteristics of a D.C Series circuit.	1	1	02
01(b)	Two filament lamps A and B take 0.7 A and 0.8 A respectively when connected across 110 V supply. Calculate the value of current when they are connected in series across a 220 V supply, assuming the filament resistances to remain unaltered. Also find the voltage across each lamp.	2	3	03
02 (a)	Explain Kirchhoff's Current Law (KCL) and Kirchhoff's Voltage Law (KVL). .Enlist Method to Solve Circuits by Kirchhoff's Laws.	1	1	05
03 (a)	Discuss on the following (i)Passive element (ii) Node. (iii) Loop.	1	1	03
03 (b)	A current of 80 A is shared by three resistances in parallel. The wires are of the same material and have their lengths in the ratio 2: 3: 4 and their cross-sectional areas in the ratio 1: 2: 3. Determine current in each resistance.	2	3	02

—The End—