No. of Printed Pages : 2 188412

Roll No. .....

DVOC (Level 3)

Sem 1st / Ref. & Air Cond., Auto, Servicing, ITM, PT, SD, AMT, FP, EMS)

Subject : Applied Mathematices-1

Time : 2 Hrs. M.M. : 50

SECTION-A

Note: Very short answer type questions . Attempt all ten question (10x1=10)

Q.1 Let A={ a, b , c } B= {1 , 2 }. Consider a relation R defined from set A to set B then R is equal to

a) A b) B

c) AxB d) BxA

Q.2 If $A=30^0$ and X= sin A + cos A then x is

a) x<0 b) x>0

c) x=0 d) None of these

Q.3 In a triangle ABC, if AB= 4 cm . BC = 5cm & CA = 6 cm then it is a _____ (Scalene / Isosceles) triangle.

Q.4 2+4+6+8+_____ is a A.P. series. (True / False)

Q.5 If Z = 3+5i then find Modulus of Z.

Q.6 $3x^2 + 5x + 7 = 0$ is a _____ equation. (Linear / quadratic)

Q.7 In how many ways letters of the word DIET can be arranged?

Q.8 The number of terms in the binomial expansion of $(x+y)^{10}$ is _____

Q.9 y = 5x is the equation of line passing through origin. (True / False)

Q.10 The eccentricity of parabola is not equal to 1. (True / False)

SECTION-B

Note: Short answer type questions. Attempt any six questions out of Eight questions. (6x5=30)

Q.11 A Circular wire of radius 7 cm cut and bend again into an arc of circle of radius 12cm find the angle subtended by arc at the centre of circle.

Q.12 Define isosceles and equilateral triangle with the help of diagram.

Q.13 Find the tenth term of series 6+9+12+15+_____

Q.14 Find the roots of equation $2x^2-5x+3=0$

Q.15 A committee of 3 persons is to be constituted from 2 men and 3 women In how many ways this can be done ?

Q.16 Find fifth term of binomial expression $(a+2b)^{10}$

Q.17 Convert (-1,1) in polar co -ordinates .

Q.18 A bag contain 2 Red balls , 3 green balls and 2 black balls. Two balls are drawn from bag . Find the probability that none of the ball is black

SECTION-C

Note: Long answer type questions. Attempt any one questions out of two questions. (10x1=10)

Q.19 Find the equation of circle passing through (0,0) , (1,3) and (4,-2)

Q.20 Find standard deviation of data given below

x:	100	110	120	130	150	160