Rayat Shikshan Sanstha's
Yashavantrao Chavan Institute of Science, Satara (Autonomous)
B.Voc.I Software Development (Semester- II)
Writing and Presentation Skills (EN 1211)
Question Bank

Q.1) Answer the following questions in two to three sentences.

i) Name the two types of clauses.

ii) Define keyboarding skill and state its use.

iii) What is word processing? Name any word processing software.

iv) Give full forms of the following abbreviations :

   i) E-mail   ii) ppt

v) Name the four types of essays.

vi) What are the types of presentation?

vii) Mention the two rules of capitalization.

viii) What is home row? Mention the keyboard keys in home row.

ix) What are the two types of indents in Microsoft word?

x) What are the types of an e-mail?

xi) Define narrative paragraph and state the tense used in a narrative paragraph.

xii) What is a presentation? Name one presentation software

xiii) What are the two types of objects?

xiv) Name the two famous word processing software.

xv) What is touch typing? What is its benefit?

xvi) What is technical writing? Give an example.

xvii) What are the types of reports?

xviii) State the importance of presentation skills.

Q.2) Draft the following.
a) Write an essay on –
i) Digital India
ii) Social media addiction
iii) Impact of Coronavirus pandemic on employment
iv) My ambition

b) Write a letter of application in response to the following advertisement.
i)

Required

A PURCHASE OFFICER
Qualification :
Degree- Diploma in Electrical Engineering, computer literate and having an experience in similar field.
Apply to:
The Managing Director;
Cosmos Ltd.; 72-E Industrial Area;
Andheri (E); Mumbai 400093.

ii)

Required

A COMPUTER TEACHER
Qualification :
Degree- Master's degree in computer science, computer literate and having an experience in similar field.
Apply to:
The Principal;
Liberty High School; 72-E
Andheri (E); Mumbai 400093.

iii)

Required

A Software Developer
Qualification :
Degree- Degree in Computer Engineering, computer literate and having an experience in similar field.
Apply to:
The Managing Director;
Sunshine Ltd.; 72-E Industrial Area;
Andheri (E); Mumbai 400093.

iv)

Required

A VFX Designer
Qualification :
Degree- Degree in Computer Engineering, course in animation and graphic

designing, computer literate and having an experience in similar field.
Apply to:
The Managing Director;
Tiny Toon Ltd.; 72-E Industrial Area;
Andheri (E); Mumbai 400093.

Q.3) Draft the following. [6+6]
a) Draft a report on-
i) the celebration of Independence Day in your college.
ii) annual report of the activities of the nature's club in your institution
iii) World Science Day celebration in your college
iv) Tree Plantation Drive organized in your locality

b) Write a piece of dialogue on the following situations:
i) two friends planning a party to celebrate their graduation
ii) a father and a son discussing end semester examination result
iii) two friends regarding participation in youth festival
iv) a hotel manager and a customer regarding booking of room

Q.4) Draft the following.
a)Write an e-mail –
i) Write an e-mail to your English professor requesting an extension for the assignment submission.
ii) Write an e-mail to your friend inviting him/her for a trip to Mahabaleshwar.
iii) Write an email to your cousin who just met with an accident inquiring about his/her health.
iv) Write an e-mail to the Principal of your institute requesting bona fide certificate.

b) Draft a presentation on-
i) Education system in India
ii) Women empowerment
iii) Global Warming
iv) Pros and cons of online education

Q.5) Do as directed
a) Identify if the following sentences are simple, compound or complex.
　　i) It was John who paid for the drinks.
　　ii) I have got four sisters and each of them is different from the other.
　　iii) Roses are beautiful flowers.

iv) He lost his money but he did not lose his patience.
v) She wrote a novel.
vi) I happen to know a man who can help you.
vii) John went to school but James remained at home.
viii) My son went to play and I started working.
ix) The students solved the questions very easily.
x) We decided to go fishing and camp out at the lake.
xi) The roads are slippery where it has rained.
xii) He is not harmful.

b) Write the synonyms of the following words.
i) Beautiful   ii) Dangerous
iii) Fear   iv) Important
v) amazing   vi) brave
vii) fast   viii) false

c) Write the antonyms of the following words.
i) Accept   ii) Presence
iii) Natural   iv) Brave
v) Beginning   vi) Agree
vii) Question   viii) Advantage

d) Identify the prefix in following words.
i) Unhappy   ii) Decode
iii) Illegal   iv) Misplace
v) irregular   vi) Displace
vii) precede   viii) incomplete

e) Identify the suffix in the following words.
i) Driver   ii) Careless
iii) Painful   iv) movement
v) feminism   vi) chemist
vii) proposal   viii) transportation

f) Rearrange the following sentences into a paragraph beginning with the initial sentence.
1. i) Their addiction forces them to spend all their free time in front of the computer.
   ii) One negative side effect is that people can get addicted to computers.
   iii) This obsession damages their family life.
   iv) Computers have several bad side effects.
2. i) The main thing that propelled the development of the aeroplanes at such a

Fast pace was, however, the first and the second world war
  ii) An aeroplane was a wonderful invention of its time.
  iii) But its use as a main means of transport was adopted later.
  iv) Some even say it was one of the greatest invention of all time.

3. i) The eldest of the three sons would have become the king after his father.
   ii) So he drove the three sons away.
   iii) There was once a king in India who died leaving behind three sons.
   iv) But the captain of the king's army wanted the kingdom for himself.

4. i) He had many brothers
   ii) When the old king died, there was fighting between the brothers for the
      throne.
   iii) Ashoka was born in the ruling Maurya family of Magadha.
   iv) Ashoka was able to defeat his brothers.

Q.6) Do as directed.
a) Identify the subject and predicate in the following sentences.
   i) The cat is sleeping in the sun.
   ii) Maria's sisters are going to the pool.
   iii) The dogs were barking loudly.
   iv) The man and his wife were working in the garden.
   v) The pretty girl was wearing a blue frock.
   vi) My mother and my aunt are trained classical dancers.

b) Identify the dependent and independent clause in the following sentences.
   i) After he completed his homework, he went to the gym.
   ii) While walking at the park, John saw a cat eating potato chips.
   iii) When I went to the zoo, I looked at the animals.
   iv) As soon as I got out of the water, I caught cold.
   v) After the flood, the family moved into a temporary shelter.
   vi) When you finish your homework, please take the dog for a walk.

c) Punctuate the following sentences correctly.
   i) i must have forgotten keys on the dining table
   ii) how colorful that rainbow is
   iii) what a huge creature
   iv) they aren't going to wait all day
   v) have they found the keys
   vi) we are a bit late for lunch

Q.7) Write short notes on the following.
a) Touch typing
b) Character formatting in Microsoft word
c) Advantages of email
d) a) Structure of a paragraph
e) Desk top publishing
f) Effective strategies of structuring a presentation
g) Capitalization
h) Types of essays
i) Appearance and body posture in presentation

Questions Bank
B.VOC. -I, Semester-II
Subject: Mathematics-I (MM-1131)
Unit-I

1)	Let, $f(x) = x^2$ then $f'(x) =$	
	A) $2x$	B) x
	C) 2	D) None of these
2)	Let, $f(x) = x + e^x$ then $f'(x) =$	
	A) e^x	B) $1 + e^x$
	C) $1 - e^x$	D) None of these.
3)	If $f(x) = e^x + x^2 + sinx$ then $f(0) =$	
	A) e^0	B) 1
	C) x	D) Both A) and B)
4)	If $f(x) = x^4 + sin2x$ then $f'(x) =$	
	A) $4x^3 - 2cos2x$	B) $4x^3 + cos2x$
	C) $4x^3 + 2cos2x$	D) $x^3 + 2cos2x$
5)	If $f(x) = 2sinx.cosx$ then $f'(x) =$	
	A) $2cos^2x + 2sin^2x$	B) $2cos^2x - 2sin^2x$
	C) $2sinx + 2cosx$	D) $2sinx - 2cosx$
6)	If $f(x) = sinx/x^2$ then $f'(x) =$	
	A) $\dfrac{x^2cosx+2xsinx}{x^4}$	B) $\dfrac{cosx+2xsinx}{x^4}$
	C) $\dfrac{x^2cosx-2xsinx}{x^4}$	D) $\dfrac{x^2cosx-2xsinx}{x^2}$
7)	If $y = sinhx$ then $\dfrac{dy}{dx} =$	
	A) $-sinhx$	B) $sinhx$
	C) $coshx$	D) $-coshx$
8)	If $y = \cosh^{-1}x$ then $\dfrac{dy}{dx} =$	
	A) $\pm\dfrac{1}{\sqrt{x^2-1}}$	B) $\pm\dfrac{1}{\sqrt{x^2+1}}$
	C) $\pm\dfrac{1}{\sqrt{(x^2+1)}}$	D) $\pm\dfrac{1}{\sqrt{(x^2-1)}}$

9)	Let, $y = x^x$ then $\frac{dy}{dx} =$	
	A) $x^x(1 + logx)$	B) $x^x(1 - logx)$
	C) $(1 - logx)$	D) $(1 + logx)$
10)	Derivative of $\log(sinx)$ is	
	A) $tanx$	B) $cotx$
	C) $\frac{1}{sinx}$	D) $\frac{1}{cosx}$
11)	Let, $sin^2x + cos^2x =$	
	A) 0	B) 2
	C) 3	D) 1
12)	Let, $cosh^2x - sinh^2x =$	
	A) 0	B) 1
	C) 2	D) -1
13)	Let, $f(x) = x^3 - 1 \, ; x \in [0,1]$ then	
	A) $Roll's \ Theorem$ is applicable	
	B) $Roll's \ Theorem$ is not applicable	
	C) $Langrange's \ Mean \ Value \ Theorem$ is applicable	
	D) Both B) and C)	
14)	Let, $f(x) = x^2 + 3x - 5 \, ; x \in [0,1]$ then	
	A) $Roll's \ Theorem$ is applicable	
	B) $Roll's \ Theorem$ is not applicable	
	C) $Langrange's \ Mean \ Value \ Theorem$ is applicable	
	D) Both B) and C)	
15)	Let, $f(x) = x^2 + 3 \, ; x \in [-1,1]$ then	
	A) $Roll's \ Theorem$ is applicable	
	B) $Roll's \ Theorem$ is not applicable	
	C) $Langrange's \ Mean \ Value \ Theorem$ is not applicable	
	D) Both B) and C)	
16)	Derivative of $coshx$ is	
	A) $-sinhx$	B) $sinhx$
	C) $sinx$	D) $- sinx$
17)	Derivative of $\sinh^{-1} x$ is	
	A) $\pm \frac{1}{\sqrt{x^2-1}}$	B) $\pm \frac{1}{\sqrt{x^2+1}}$

	C) $\pm \dfrac{1}{\sqrt{(x^2+1)}}$	D) $\pm \dfrac{1}{\sqrt{(x^2-1)}}$
18)	Let, $\tanh x =$	
	A) $\dfrac{e^x+e^{-x}}{e^x-e^{-x}}$	B) $\dfrac{e^x-e^{-x}}{e^x+e^{-x}}$
	C) $\dfrac{e^x+e^{-x}}{2}$	D) $\dfrac{e^x-e^{-x}}{2}$
19)	Derivative of $sin2x$	
	A) $cos2x$	B) $-cos2x$
	C) $2cos2x$	D) $-2cos2x$
20)	Derivative of $-e^{-x}$ is	
	A) e^{-x}	B) $-e^{-x}$
	C) e^x	D) $-e^x$
21)	The stationary points of function $f(x) = x^2 + 2x + 3$ is	
	A) 1	B) -1
	C) 2	D) 0, -2
22)	The stationary points of function $f(x) = x^3 + 2x^2$ is	
	A) 1	B) 4/3
	C) $0, -4/3$	D) None of these
23)	The stationary points of function $f(x) = x^3 - 2x^2$ is	
	A) 1	B) $-4/3$
	C) 0,4/3	D) None of these
24)	The stationary value of function $f(x) = x^2 + 2x + 3$ is	
	A) -2	B) 11
	C) 2	D) -11
25)	The stationary value of function $f(x) = x^3 + 2x^2$ at largest stationary point is	
	A) 32/27	B) 160/27
	C) -32/27	D) 0
26)	The stationary value of function $f(x) = x^3 - 2x^2$ at smallest stationary point is	
	A) 32/27	B) 160/27
	C) -32/27	D) 0
27)	Derivative of the function $f(x)$ is given by the formula $f'(x) =$	

	A) $\frac{f(x+h)-f(x)}{h}$		B) $\lim_{h\to 0} \frac{f(x+h)-f(x)}{h}$
	C) $\lim_{h\to 0} \frac{f(x+h)+f(x)}{h}$		D) None of these
28)	$\frac{d}{dx}(u+v) =$		
	A) $\frac{d}{dx}(u) + \frac{d}{dx}(v)$		B) $\frac{d}{dx}(v) + \frac{d}{dx}(u)$
	C) $\frac{d}{dx}(u) - \frac{d}{dx}(v$		D) Both A) and B)
29)	$\frac{d}{dx}(u.v) =$		
	A) $v.\frac{d}{dx}(u) + u.\frac{d}{dx}(v)$		B) $u.\frac{d}{dx}(v) + v.\frac{d}{dx}(u)$
	C) $\frac{d}{dx}(u) - \frac{d}{dx}(v)$		D) Both A) and B)
30)	$\frac{d}{dx}(af(x)) =$		
	A) $\frac{d}{dx}(f(x))$		B) $a.\frac{d}{dx}(f(x))$
	C) 0		D) None of these

Answer the following questions: **[2 Marks]**

1)	Write the derivatives of $sinx$ and $cosx$ $w.r.t.x$.
2)	Write the derivative of $tanx$ and $cotx$ $w.r.t.x$.
3)	Write the derivative of $cosecx$ and $secx$ $w.r.t.x$.
4)	Find the derivative of $sinx + cosx$ $w.r.t.x$.
5)	Find the derivative of $x^2 - 2e^x$ $w.r.t.x$.
6)	Find the derivative of $x^2.sinx$ $w.r.t.x$.
7)	Find the derivative of $\frac{e^x}{x^3}$ $w.r.t.x$.
8)	State Roll's theorem.
9)	State langrage's Mean Value theorem.
10)	Write formulae of $sinhx$ and $coshx$.
11)	Find the stationary points of function $f(x) = x^2 + 2x + 3$.
12)	Find the stationary points of function $f(x) = x^3 + 2x^2$.
13)	Find the stationary points of function $f(x) = x^3 - 2x^2$

Answer the following questions: **[4 Marks]**

1)	Find the derivative of hyperbolic function $y = sinhx$ $w.r.t.x$.
2)	Find the derivative of hyperbolic function $y = coshx$ $w.r.t.x$.

3)	Find the derivative of hyperbolic function $y = sinh^{-1}x$ $w.r.t.x$.
4)	Find the derivative of hyperbolic function $y = cosh^{-1}x$ $w.r.t.x$.
5)	Find the derivative of hyperbolic function $y = tanh^{-1}x$ $w.r.t.x$.
6)	Find the derivative of hyperbolic function $y = coth^{-1}x$ $w.r.t.x$.
7)	Find the derivative of hyperbolic function $y = cosech^{-1}x$ $w.r.t.x$.
8)	Find the derivative of hyperbolic function $y = sech^{-1}x$ $w.r.t.x$.
9)	Find the stationary points and values of function $f(x) = x^2 + 2x + 3$.
10)	Find the stationary points and values of function $f(x) = x^3 - 2x^2$.

Answer the following questions: **[8 marks]**

1)	Find the derivative of hyperbolic function $y = tanhx$ $w.r.t.x$.
2)	Find the derivative of hyperbolic function $y = cothx$ $w.r.t.x$.
3)	Find the derivative of hyperbolic function $y = cosechx$ $w.r.t.x$.
4)	Find the derivative of hyperbolic function $y = sechx$ $w.r.t.x$.
5)	Find the derivative of logarithmic function $y = x^{sinx}$ $w.r.t.x$.
6)	Find the derivative of logarithmic function $y = x^{tanx}$ $w.r.t.x$.
7)	Find the derivative of logarithmic function $y = \log(sinx)$ $w.r.t.x$.
8)	Find the derivative of logarithmic function e^{sinx} $w.r.t.x$.
9)	Find the derivative of logarithmic function $\log(logx)$ $w.r.t.x$.
10)	Find the derivative of logarithmic function $\sin(e^x)$ $w.r.t.x$.
11)	Find maxima and minima of function $f(x) = x^2 + 1$.
12)	Find maxima and minima of function $f(x) = x^3 - 12x + 15$.
13)	Find maxima and minima of function $f(x) = 2x^2 - 4x + 100$.
14)	Find maxima and minima of function $f(x) = 2x^3 - 6x + 1$.
15)	Verify whether Roll's theorem is applicable or not for function $f(x) = x^2 + 3x - 5; x \in [0,1]$.
16)	Verify whether Roll's theorem is applicable or not for function $f(x) = x + 3; x \in [2,5]$.
17)	Verify whether Roll's theorem is applicable or not for function $f(x) = x^2 + 3; x \in [-2,2]$.
18)	Verify whether Roll's theorem is applicable or not for function $f(x) = x^4 + 3x^2 + 1; x \in [-1,1]$
19)	Apply Langrage's Mean Value theorem for function $f(x) = x^3 - 1$.

20)	Apply Langrage's Mean Value theorem for function $f(x) = x^4 - 5x^2 - 11$.

Questions Bank
B.VOC. -I, Semester-II
Subject: Mathematics-I (MM-1131)
Unit-II

Multiple Choice Questions:

1)	$g.c.d.(108,12) =$	
	A) 12	B) 108
	C) 36	D) None of these
2)	$g.c.d.(100,25) =$	
	A) 100	B) 25
	C) 50	D) None if these
3)	$g.c.d.(172,20) =$	
	A) 172	B) 20
	C) 4	D) None of these
4)	$g.c.d.(996,24) =$	
	A) 996	B) 24
	C) 12	D) None of these
5)	$g.c.d.(225,9) =$	
	A) 225	B) 9
	C) 3	D) None of these
6)	$g.c.d.(730,15) =$	
	A) 730	B) 5
	C) 15	D) None of these
7)	$g.c.d.(970,22) =$	
	A) 970	B) 2
	C) 22	D) None of these
8)	$l.c.m.(25,27) =$	
	A) 25	B) 27
	C) 675	D) 1
9)	$l.c.m.(32,6) =$	
	A) 32	B) 6

	C) 192		D) 96
10)	$l.c.m.(100,25) =$		
	A) 100		B) 25
	C) 50		D) None of these
11)	$l.c.m.(26,884) =$		
	A) 26		B) 884
	C) 442		D) None of these
12)	Which of the following is true?		
	A) $2 \equiv 1(mod\ 3)$		B) $1 \equiv 2(mod\ 3)$
	C) $3 \equiv 2(mod\ 2)$		D) $2 \equiv 2(mod\ 3)$
13)	Which of the following is not true?		
	A) $3 \equiv 3(mod\ 3)$		B) $6 \equiv 3(mod\ 3)$
	C) $25 \equiv 4(mod\ 3)$		D) $3 \equiv 1(mod\ 3)$
14)	Which of the following is true?		
	A) $g.c.d.(a,b) \times l.c.m.(a,b) = a + b$		
	B) $g.c.d.(a,b) + l.c.m.(a,b) = a \times b$		
	C) $g.c.d.(a,b) \times l.c.m.(a,b) = a \times b$		
	D) $g.c.d.(a,b) = a \times b$		
15)	Which of the following is true?		
	A) $a \equiv a(mod\ n)$		
	B) $a^2 \equiv a^2(mod\ n)$		
	C) $100 \equiv 100(mod\ 5)$		
	D) All		
16)	Let, $a \equiv b(mod\ n)$ then		
	A) $b \equiv a(mod\ n)$		B) $n|a - b$
	C) $n|b - a$		D) All
17)	Let, $a \equiv b(mod\ n)$ and $b \equiv c(mod\ n)$ then		
	A) $a \equiv c(mod\ n)$		B) $c \equiv a(mod\ n)$
	C) Both A) and B)		D) None of these
18)	Let, $a \equiv b(mod\ n)$ and $c \equiv d(mod\ n)$ then		
	A) $a + d \equiv c + b(mod\ n)$		B) $c + b \equiv a(mod\ n)$
	C) $a + c \equiv b + d(mod\ n)$		D) None of these
19)	Let, $a \equiv b(mod\ n)$ and $c \equiv d(mod\ n)$ then		

	A) $ad \equiv cb \pmod{n}$	B) $cb \equiv a \pmod{n}$
	C) $ac \equiv bd \pmod{n}$	D) None of these
20)	Let, $a \equiv b \pmod{n}$ then which of the following is not true?	
	A) $b \equiv a \pmod{n}$	B) $a^2 \equiv a^2 \pmod{n}$
	C) $a^2 \equiv b^2 \pmod{n}$	D) $a^2 \equiv b \pmod{n}$
21)	Let, $g.c.d.(a,b) = 2$ and $l.c.m.(a,b) = 4$ then $a.b =$	
	A) 2	B) 4
	C) 6	D) 8
22)	Let, $g.c.d.(a,b) = 2$ and $l.c.m.(a,b) = 4$ then $a.b =$	
	A) 2	B) 4
	C) 6	D) 8
23)	Let, $g.c.d.(a,b) = 2$ and $l.c.m.(a,b) = 60$ then $a.b =$	
	A) 2	B) 60
	C) 120	D) 80
24)	Let, $g.c.d.(a,b) = 1$ and $l.c.m.(a,b) = 900$ then $a.b =$	
	A) 1	B) 900
	C) 6	D) 800
25)	How many distinct prime factors of 1000.	
	A) 2	B) 3
	C) 4	D) 5
26)	How many distinct prime factors of 996.	
	A) 2	B) 3
	C) 4	D) 5
27)	How many distinct prime factors of 30.	
	A) 2	B) 3
	C) 4	D) 1
28)	How many distinct prime factors of 752.	
	A) 2	B) 3
	C) 4	D) 5
29)	Which of the following pairs are relatively primes?	
	A) (2,100)	B) (7,14)
	C) (12,36)	D) (8,9)
30)	Which of the following pairs are not relatively primes?	
	A) (2,100)	B) (7,14)

	C) (12,36)	D) All

Answer the followings: [2 Marks]

1)	If $a \equiv b(mod\ n)$ then show that $b \equiv a(mod\ n)$
2)	Find Unique Factorization of 1000.
3)	Show that $a \equiv a(mod\ n)$.
4)	Find Unique Factorization of 1224.
5)	Find Unique Factorization of 625.
6)	Find Unique Factorization of 4276.
7)	Find Unique Factorization of 265.
8)	Find $l.c.m.(946,24)$.
9)	Find $l.c.m.(648,38)$.
10)	Find $g.c.d.(86,56)$.
11)	Find $g.c.d.(49,94)$.
12)	Define $g.c.d.$ of two integers.
13)	Define $l.c.m.$ of two integers.
14)	Define relatively prime numbers.
15)	State Fermat's Theorem.

Answer the followings: [4 Marks]

1)	Find $g.c.d$ using division algorithm and also $l.c.m$ of 172 & 20.
2)	If $a \equiv b(mod\ n)$ and $b \equiv c(mod\ n)$ then show that $a \equiv c(mod\ n)$
3)	Define the relatively prime numbers. Check whether $a = 10, b = 50$ are relatively prime or not.
4)	Find $g.c.d$ using division algorithm and also $l.c.m$ of 172 & 20.
5)	If $a \equiv b(mod\ n)$ then show that $a^2 \equiv b^2(mod\ n)$.
6)	Define the relatively prime numbers. Check whether $a = 19, b = 10$ are relatively prime or not.
7)	Find $g.c.d$ using division algorithm and also $l.c.m$ of 100 & 20.
8)	Find $g.c.d.$ using division algorithm and also $l.c.m.$ of 996 & 24.
9)	Find $g.c.d.$ using division algorithm and also $l.c.m.$ of 225 & 9.

10)	Find $g.c.d.$ using division algorithm and also $l.c.m.$ of 100 & 25.
11)	Find $g.c.d.$ using division algorithm and also $l.c.m.$ of 32 & 6.
12)	Define the relatively prime numbers. Check whether $a = 144, b = 169$ are relatively prime or not.
13)	Define the relatively prime numbers. Check whether $a = 225, b = 121$ are relatively prime or not.

Answer the followings: **[8 Marks]**

1)	If $a \equiv b(mod\ n)$ and $c \equiv d(mod\ n)$ then $i)\ a + c \equiv b + d(mod\ n)$ and $ii)\ ac \equiv bd(mod\ n)$.
2)	Verify $g.c.d(a,b).l.c.m(a,b) = a.b$ where, $a = 26\ and\ b = 12$.
3)	Verify $g.c.d(a,b) \times l.c.m(a,b) = a.b$ where, $a = 125\ and\ b = 900$.
4)	Verify $g.c.d(a,b) \times l.c.m(a,b) = a.b$ where, $a = 153\ and\ b = 639$.
5)	If $a \equiv b(mod\ n)$ then $i)\ a + c \equiv b + c(mod\ n)$ and $ii)\ ac \equiv bc(mod\ n)$.
6)	Find the value of $(103)^{444}(mod\ 11)$ using Fermat's Theorem.
7)	Find the value of $(57)^{101}(mod\ 5)$ using Fermat's Theorem.

Questions Bank
B.VOC. -I, Semester-II
Subject: Mathematics-I (MM-1131)
Unit-III

Multiple Choice Questions:

1)	Let, $z = a + ib\ ; a, b \in \mathbb{R}$ and $b = 0$ then z is purely
	A) Real B) Imaginary
	C) Integer D) None of these
2)	Let, $z = a + ib\ ; a, b \in \mathbb{R}$ and $a = 0$ then z is purely
	A) Real B) Imaginary
	C) Integer D) None of these
3)	Let, $z_1 = 2 + 3i$ and $z_2 = 3 + 2i$ then $z_1 + z_2 =$
	A) $5 + 5i$ B) $5 + 3i$
	C) $3 + 5i$ D) None of these
4)	Let, $z_1 = 4 - i$ and $z_2 = -3 - i$ then $z_1 + z_2 =$
	A) $1 + 2i$ B) $-1 + 2i$
	C) $1 - 2i$ D) None of these

5)	Let, $z_1 = -2 - 5i$ and $z_2 = -3 - 10i$ then $z_1 - z_2 =$	
	A) $1 + 15i$	B) $1 - 10i$
	C) $-1 + 5i$	D) $1 + 5i$
6)	Let, $z_1 = 8 - 25i$ and $z_2 = -8 + 10i$ then $z_1 - z_2 =$	
	A) $16 + 15i$	B) $16 - 35i$
	C) $-15i$	D) $-16 + 35i$
7)	Let, $z_1 = 12 + i$ and $z_2 = 1 + 10i$ then $z_1 . z_2 =$	
	A) $2 + 121i$	B) $-2 + 121i$
	C) $2 - 121i$	D) $-2 - 121i$
8)	Let, $z_1 = -2 + 3i$ and $z_2 = 4 - 5i$ then $z_1 . z_2 =$	
	A) $-7 + 22i$	B) $7 - 22i$
	C) $-7 - 22i$	D) $7 + 22i$
9)	Let, $z_1 = 4 - 20i$ and $z_2 = 2$ then $z_1 / z_2 =$	
	A) $2 + 10i$	B) $2 - 10i$
	C) $-2 + 10i$	D) $-2 - 10i$
10)	Let, $z_1 = 2 + 3i$ and $z_2 = 4 + 3i$ then $z_1 / z_2 =$	
	A) $\dfrac{23 - 2i}{25}$	B) $\dfrac{23 + 2i}{25}$
	C) $\dfrac{-23 - 2i}{25}$	D) $\dfrac{23 + 2i}{25}$
11)	Let, $z_1 = 2 + 3i$ and $z_2 = -2 + 3i$ then $z_1 + z_2$ is purely	
	A) Real	B) Imaginary
	C) Integer	D) None of these
12)	Let, $z_1 = 7.2 + 3i$ and $z_2 = 6.9 + 3i$ then $z_1 - z_2$ is purely	
	A) Real	B) Imaginary
	C) Integer	D) None of these
13)	Let, $z_1 = 7$ and $z_2 = 3.3i$ then $z_1 . z_2$ is purely	
	A) Real	B) Imaginary
	C) Integer	D) None of these
14)	Let, $z_1 = 8i$ and $z_2 = -2i$ then $z_1 . z_2$ is purely	
	A) Real	B) Imaginary
	C) Integer	D) Both A) and C)
15)	Let, $z = a + ib$ then $\bar{z} =$	
	A) $z = -a + ib$	B) $z = a - ib$

	C) $z = a + ib$		D) $z = -a - ib$
16)	Let, $z = -3 + 5i$ then $\bar{z} =$		
	A) $z = -3 + i5$		B) $z = 3 - 5i$
	C) $z = 3 + 5i$		D) $z = -3 - 5i$
17)	Let, $z = -35i$ then $\bar{z} =$		
	A) $z = -35i$		B) $z = 35$
	C) $z = 35i$		D) $z = -35$
18)	Let, $z = -13$ then $\bar{z} =$		
	A) $z = -13$		B) $z = 13$
	C) $z = 13i$		D) $z = -13i$
19)	Let $z = a + ib$ is a complex number where a, b are		
	A) Real Numbers		B) Complex Numbers
	C) Rational Numbers		D) None of these
20)	Let $z = a + ib$ is a complex number where $a, b \in \mathbb{R}$ then it is represented as point		
	A) (b, a)		B) $(-a, b)$
	C) (a, b)		D) $(-b, a)$

Answer the following: **[2 Marks]**

1)	If $z_1 = 12 - 3i$ and $z_2 = -2 + 75i$ then find $z_1 + z_2$.
2)	If $z_1 = 22 - 3i$ and $z_2 = -4 + 35i$ then find $z_1 - z_2$.
3)	If $z_1 = 2 + 3i$ and $z_2 = 4 + 5i$ then find $z_1 . z_2$.
4)	If $z_1 = 1 + i$ and $z_2 = -4 + 3i$ then find z_1/z_2.
5)	If $z = a + ib$ then find $\bar{z}$.
6)	If $z = 2 - 3i$ then find $\bar{z}$.
7)	If $z = 100$ then find $\bar{z}$.
8)	If $z = -54i$ then find $\bar{z}$.
9)	Define complex number.

Answer the following: **[4 Marks]**

1)	If $z_1 = 7 - 3i$ and $z_2 = -52 + 75i$ then find $z_1 + z_2$ and $z_1 - z_2$.
2)	If $z_1 = -3i$ and $z_2 = -75i$ then find $z_1 + z_2$ and $z_1 . z_2$.
3)	If $z_1 = 2 - 5i$ and $z_2 = -1 + i$ then find $z_1 + z_2$ and z_1/z_2.
4)	If $z_1 = 9 - i$ and $z_2 = -52 - 5i$ then find $z_1 - z_2$ and $z_1 . z_2$.
5)	If $z_1 = 1 + 7i$ and $z_2 = -2 + 5i$ then find $z_1 - z_2$ and z_1/z_2.

6)	If $z_1 = 20 - 35i$ and $z_2 = 5i$ then find $z_1 . z_2$ and z_1/z_2 .

Questions Bank
B.VOC.-I, Semester-II
Subject: Mathematics-I (MM-1131)
Unit-IV

Multiple Choice Questions:

1)	Order of differential equation of the family is equal to
	A) Number of Linearly independent variables
	B) Number of linearly dependent variables
	C) Number of linearly dependent or independent variables
	D) None of these
2)	Order of differential equation of the family is equal to
	A) Number of Linearly independent variables
	B) Number of linearly dependent variables
	C) Number of arbitrary constants
	D) None of these
3)	Ordinary differential equation corresponding to $y = Asin2x$ where A is constant is

	A) $2y = y'tan2x$	B) $y = y'tan2x$
	C) $y = 2y'tan2x$	D) All

4)	Ordinary differential equation corresponding to $y = Ae^{Bx}$ where A & B are arbitrary constants is

	A) $y'^2 = y''$	B) $yy'^2 = y''$
	C) $y'^2 = -y''$	D) $y'^2 = yy''$

5)	Let, $\alpha_1 and \alpha_2$ are two distinct real roots then complementary function is

	A) Ae^{α_1}	B) $A\alpha_1 + Be^{\alpha_2}$
	C) $Ae^{\alpha_1} + Be^{\alpha_2}$	D) None of these.

6)	Let, $\alpha_1 and \alpha_2$ are two distinct real equal roots then complementary function is

	A) Ae^{α_1}	B) $A\alpha_1 + Be^{\alpha_2}$
	C) $(A + Bx)e^{\alpha_1}$	D) None of these.

7)	Let, $\alpha \pm i\beta$ are two complex roots then complementary function is

	A) $Acos\alpha x + Bsin\beta x$	B) $Acos\alpha x + Bsinx$
	C) $Asin\beta x + Bcox$	D) None of these

8)	Linear differential equation has degree	
	A) one	B) two
	C) can't say anything	D) None of these
9)	In linear differential equation there is no product of	
	A) derivative terms	B) independent variables
	C) derivative terms and independent Variables	D) All
10)	Ordinary differential equation contains	
	A) one or more independent variables	B) one or more dependent variables
	C) Both A) and B)	D) None of these
11)	Ordinary differential equation contains	
	A) single dependent variables	B) single independent variables
	C) Both A) and B)	D) None of these
12)	In linear differential equation there is power of derivatives and dependent variables should be	
	A) one	B) two
	C) can't say anything	D) None of these
13)	Order of differential equation of the family $y = Ae^{Bx}$ where A and B are constants is	
	A) one	B) two
	C) three	D) four
14)	Let, $\frac{1}{D+3} e^x =$	
	A) $\frac{1}{4}$	B) $\frac{1}{4} e^{-x}$
	C) $\frac{1}{4} e^x$	D) $-\frac{1}{4}$
15)	Let, $\frac{1}{D^2-D+4} e^{-2x} =$	
	A) $\frac{1}{10}$	B) $\frac{1}{10} e^{-2x}$
	C) $-\frac{1}{10}$	D) $\frac{-1}{10} e^{-2x}$
16)	Laplace transform of {1} is	
	A) 1	B) $\frac{1}{p}$
	C) p	D) None of these

17)	Laplace transform of $\{t^2\}$ is	
	A) p^2	B) $\dfrac{1}{t^2}$
	C) $\dfrac{1}{p^2}$	D) None of these
18)	Laplace transform of $\{sinat\}$ is	
	A) $\dfrac{a}{p^2+a^2}$	B) $\dfrac{a}{p^2-a^2}$
	C) $\dfrac{p}{p^2+a^2}$	D) $\dfrac{p}{p^2-a^2}$
19)	Laplace transform of $\{sinhat\}$ is	
	A) $\dfrac{a}{p^2+a^2}$	B) $\dfrac{a}{p^2-a^2}$
	C) $\dfrac{p}{p^2+a^2}$	D) $\dfrac{p}{p^2-a^2}$
20)	Laplace transform of $\{cosat\}$ is	
	A) $\dfrac{a}{p^2+a^2}$	B) $\dfrac{a}{p^2-a^2}$
	C) $\dfrac{p}{p^2+a^2}$	D) $\dfrac{p}{p^2-a^2}$
21)	Laplace transform of $\{coshat\}$ is	
	A) $\dfrac{a}{p^2+a^2}$	B) $\dfrac{a}{p^2-a^2}$
	C) $\dfrac{p}{p^2+a^2}$	D) $\dfrac{p}{p^2-a^2}$
22)	Laplace transform of $\{e^{at}\}$ is	
	A) $\dfrac{1}{p+a}$	B) $\dfrac{1}{p-a}$
	C) $\dfrac{1}{p}$	D) None of these
23)	Laplace transform of $\{f(t)+g(t)\}$ is	
	A) $L\{f(t)\}+L\{g(t)\}$	B) $L\{f(t)\}-L\{g(t)\}$
	C) $L\{f(t)\}.L\{g(t)\}$	D) None of thses
24)	Laplace transform of $\{te^t\}$ is	
	A) $\dfrac{1}{p-1}$	B) $\dfrac{1}{(p-1)^2}$
	C) $\dfrac{-1}{(p-1)^2}$	D) $\dfrac{-1}{p-1}$
25)	Laplace transform of $\{t^n\}$ is	
	A) $\dfrac{(n-1)!}{p^{n+1}}$	B) $\dfrac{(n+1)!}{p^{n+1}}$

	C) $n!/p^{n+1}$	D) None of these
26)	Laplace transform of $\{tf(t)\}$ is	
	A) $-\dfrac{d}{dp}(f(p))$	B) $\dfrac{d}{dp}(f(p))$
	C) $-\dfrac{d}{dp}(p)$	D) None of these
27)	Differential equation contains	
	A) derivative terms	B) one or more dependent variables
	C) one or more independent variables	D) All
28)	Let, $\dfrac{1}{D^2-3}\,e^{3x} =$	
	A) $\dfrac{1}{6}$	B) $-\dfrac{1}{6}$
	C) $\dfrac{1}{6}\,e^{3x}$	D) $-\dfrac{1}{6}\,e^{3x}$
29)	Laplace transform of $\{2t+1\}$ is	
	A) $\dfrac{2}{p^2}+\dfrac{1}{p}$	B) $\dfrac{2}{p^2}-\dfrac{1}{p}$
	C) $\dfrac{1}{p^2}+\dfrac{2}{p}$	D) $\dfrac{1}{p^2}-\dfrac{2}{p}$
30)	Laplace transform of $\{cos2t\}$ is	
	A) $\dfrac{2}{p^2+4}$	B) $\dfrac{2}{p^2-4}$
	C) $\dfrac{p}{p^2+4}$	D) $\dfrac{p}{p^2-4}$

Answer the following questions: **[2 marks]**

1)	Define Differential Equation.
2)	Define Ordinary Differential Equation.
3)	Define linear differential equation.
4)	Solve the differential equation $(D^3 - D^2 + D - 1)y = 0$.
5)	Solve the differential equation $(D^3 - D^2 + 4D - 4)y = 0$.
6)	Solve the differential equation $(D^2 + 1)y = 0$.
7)	Solve the differential equation $(D^2 - 2D + 1)y = 0$.
8)	Find Ordinary differential equation corresponding to $y = A\sin2x\ where\ A$ is constant.
9)	Find $L\{e^{at}\}\ and\ L\{e^{-5t}\}$.
10)	Find $L\{sinat\}\ and\ L\{sin2t\}$.

11)	Find $L\{sinhat\}$ and $L\{sinh2t\}$.
12)	Find $L\{coshat\}$ and $L\{cosh2t\}$.
13)	Find $L\{cosat\}$ and $L\{cos2t\}$.
14)	Find $L\{t^n\}$ and $L\{t^4\}$.
15)	Find $L\{tf(t)\}$ and $L\{te^{2t}\}$

Answer the following questions: **[4 Marks]**

1)	Find ordinary differential equation corresponding to $y = Ae^{Bx}$ $where$ A & B are arbitrary constants.
2)	Find Ordinary differential equation corresponding to $y = Asin2x + Bcos2x$ $where$ A, B are constant.
3)	Find Ordinary differential equation corresponding to $y = (x - a)^2 + (y - b)^2$ where a, b are contants.
4)	Find Laplace transformation of $1 + t^2 + \dfrac{t^4}{12}$.
5)	Find Laplace transformation of $t^2 + \dfrac{t^4}{12}$.
6)	Find Laplace transformation of $\dfrac{1}{2} - 2e^{-t} + \dfrac{5}{2}e^{-2t}$.

Answer the following questions: **[8 Marks]**

1)	Find the solution of $(D^2 + 4D + 4)y = sinhx$.
2)	Find the solution of $(D^2 - 1)y = 1$.
3)	Solve the differential equation $(D^2 - 3D + 2)y = e^{-x}$
4)	Find the solution of $(D^2 - 9)y = cosh2x$.
5)	Find the solution of $(D^2 - 2D + 1)y = 1$.
6)	Solve the differential equation $(D^2 - 3D + 2)y = e^{4x}$.
7)	Find Laplace transformation of $i)$ $e^{-7t} + sinh2t$ and $ii)$ $100 + t - t^2 + sin2t$.
8)	Find Laplace transformation of $i)$ $1 - t$ and $ii)$ $2 + t - 2e^t + 2te^t$.
9)	Find Laplace transformation of $i)$ $1 + 2t$ and $ii)$ $12 + t + 2e^t + 5te^t$.

Question Bank

VS 322: Web Designing (HTML/CSS)

Que .Answer the following   [8 Marks]

1. Explain Structure of HTML program?
2. Explain <IMG> tag with attribute & example in brief.
3. Explain all heading tags in html with attribute and example.
4. Explain list tag with its type and example.
5. What is the formatting tag? Explain with example.
6. What are the advantages of HTML?
7. Explain Table tag with all the attributes and example
8. What is Style sheet? Explain Inline Style sheet.
9. C) Explain Basic elements of HTML program.
10. Write the HTML program for create list and display ordered list & unordered list.
11. Explain input tag
12. Explain Disadvantages of HTML
13. Explain how to organize text using DIV tag? Explain with example.
14. Define Form. Write a HTML code for creating a registration form by covering all the input
15. Write an example for internal style sheet
16. What are the formatting tags? Explain with example.
17. What are the advantages of HTML?
18. Write the HTML program for create list and display ordered list & unordered list.
19. Explain input type in HTML
20. Explain Disadvantages of HTML
21. How to create a table in HTML.Explain with example.
22. Explain Div. tag with example
23. Define Form. Write a HTML code for creating a registration form by covering all the input
24. What is CSS? Explain all type with example?
25. Explain any 5 basic tags used in HTML with example.
26. Why we use HTML for Webpage creation?
27. Explain Marquee tag in brief.

28. Explain the Structure of HTML.
29. Create a web page some links to various search engines (google, yahoo etc)

Answer the following question [2 Marks]

1. What is Webpage?
2. What is HTML?
3. Why HTML called Markup language?
4. What is tag?
5. What is stylesheet?
6. Define <h1> tag.
7. What attribute is used for changing background color of web page?
8. What is JPEG?
9. What is Website?
10. What is cellspacing?
11. What is cellpadding?
12. What is <br> tag?
13. What is colspan?
14. Define rowspan?
15. What is Unorderd list?
16. What is a frame?
17. List any four common browers?
18. List and explain any two html elements?
19. What are HTML forms?
20. What is <br> tag?
21. What is colspan?
22. Define rowspan?
23. What is Unorderd list?
24. What is a frame?

Answer the following [4 marks]

1. Write a Short note on frameset tag.
2. What is Hyperlink? How they are created?
3. Explain Applications of HTML.

4. Create a Webpage with a link at the top of it that when clicked will jump to the next page.
5. Create a webpage Display an image that has a border of size 2, a width of 200, and a height of 200.
6. Create a webpage Print some deleted and inserted text of your choosing.
7. Create a web page that Print two lists with any information you want. One list should be an ordered list, the other list should be an unordered list.
8. Create a webpage and set its title to "This is a webpage"
9. create a webpage for a paragraph & use all formatting tag on it
10. Create a web page of your college with following specifications Place your College name at the top of the page in large text followed by address in smaller size Add names of courses offered each in a different color, style and typeface Add scrolling text with a message of your choice Add college image at the bottom

Database Management System (VS 323)
Subject Code: 80029
Question Bank

Q.1) Answer the following questions.   **[2 marks]**
1. What is Database Management System?
2. What do you understand by the term Normalization?
3. Enlist any four constraints used in DBMS.
4. Explain Primary Key and foreign key in short.
5. Explain the concept of tabular data.
6. What are the different four languages used in DBMS?
7. Write down the full form of data languages DML, DQL, DCL, DDL.
8. What do you understand by the term DBMS?
9. What is Normalization?
10. Define Primary Key.
11. Write down a query to create table .
12. Enlist any four data models in short.
13. What is database?
14. Explain Super Key.
15. Explain the components of table.
16. Define Normalization and its forms.
17. Write down a query to create table with four columns
18. What is constraint?
19. Explain SQL.
20. Explain queries to insert a records.

Q.2) Answer the following questions   **[6 marks]**
1. Explain the components of database in detail?
2. What are the components of E-R diagram? Explain them in detail.
3. What are the types of relationship? Explain many to many relationship in detail with example.
4. Write down a query to create a table named student info and insert three records in it .
5. Explain the relational data model in detail.
6. Difference between DBMS and RDBMS
7. Enlist and explain any four SQL Datatypes
8. Explain in detail the DDL SQL command.
9. Explain the Arithmetic operators in database.
10. Write down a query for retrieval of record .
11. Explain Relational Data Model in detail with the help of diagram.
12. Enlist and explain any three constraints in detail.

13. Explain Software, Hardware , procedure and users are the components.
14. Draw and explain Entity, attributes and relationship in E-R Diagram
15. Enlist types of relationship. Explain One to many relationship in detail along with example.
16. What are the various data types used for DBMS.
17. Explain in detail the DDL SQL command
18. Explain the file Management system in detail.
19. Draw and explain the Hierarchical Data Model in detail .
20. What are the components used in Database? Explain them in detail.
21. What is ERD? Explain the Entity Relationship Diagram in Detail.
22. What are mapping cardinalities? Explain one to one mapping with example.
23. Enlist and explain the various data types used in Database Management system.
24. What is Peer to Peer Type of Database. Explain it in detail.
25. Draw and explain the distributed database in detail.
26. Draw and explain the centralized database in detail.
27. Which are the logical operators? Explain the AND ,OR and NOT operator in detail.
28. Explain Char, varchar, int, float datatypes in detail.
29. Explain +,-,*,/,% types of arithmetic operators in detail.
30. Explain advantages and disadvantages of DBMS.

Q.3) Answer the following questions   [4 mark]
1. What are the uses of constraints.
2. Explain the comparison operators in details
3. Write down the advantages of DBMS.
4. Explain the comparison operators in details
5. Write down the advantages of DBMS.
6. What is a null constraint? Explain it in detail.
7. What is SQL? What are its uses
8. Explain the components of RDBMS.
9. Explain in detail the DML SQL command
10. Enlist and explain any four SQL Datatypes
11. What is a null constraint? Explain it in detail.
12. Explain the comparison operators in details

B.Voc. –I (Software Development) Sem.-II Examination
Object Oriented Programming in C++ (VS 324)
Question Bank

2 Marks Que

1. What is Inheritance?
2. Define access modifiers.
3. What are constructors?
4. Explain what is sub, derived, child class?
5. What is OOP?
6. Define Static binding.
7. Define dynamic binding.
8. What are the benefits of OOP?
9. Explain concept of object and class?
10. Explain different types of polymorphism?
11. Define Destructors.
12. Define hierarchical inheritance.
13. Explain Storage classes in C++?
14. What is inheritance and types of inheritance?
15. What is operator overloading?
16. What is copy constructor?
17. Define Encapsulation.
18. Define exception handling.

6 Marks Que

1. Explain the use of destructor in C++
2. What do you mean by operator precedence? Explain with example.
3. Write down difference between function overloading and function overriding.
4. Demonstrate the use of try, catch, throw and nested try.
5. Explain how memory is allocated to an object of a class with diagram.
6. Explain local and global variables with examples.
7. State any four concepts of object oriented programming
8. Write a program to declare a class "Staff" having data members as name and post. Accept this data
9. for 5 staffs and display names of staff who are HOD.
10. Explain multiple and multilevel inheritance with example.
11. Explain how memory is allocated to an object of a class with diagram.
12. Write down syntax and example to create a class.
13. Explain all OOP concepts in detail.
14. Explain structure of C++ program with example.
15. Write difference between Run-time and Compile-time polymorphism with example.
16. Explain local and global variables with examples.
17. Explain concept of Hierarchical Inheritance with program.
18. Write short note on operator precedence? Explain with example.
19. Explain access specifiers in detail with example.

4 Marks Que

1. Differentiate between error and exception with example.
2. Which are input and output operator in C++? Give example.
3. What arefeatures of object oriented programming?
4. What is copy constructor? Explain working with program.
5. What are advantages of Inheritance?
6. Write down difference between Constructor and Destructor.
7. Explain hybrid Inheritance with example.
8. Write a program to create a class "Student" having data member as name, roll no. and percentage to read and display details for 10 students.
9. What are the rules for operator overloading?
10. Explain concept of friend function.
11. Define constructor and write syntax to declare constructor.
12. State any four features of OOP.
13. Explain single inheritance with program.
14. How do we invoke constructor?
15. Explain Data abstraction. Give one real time example.
16. What is new and delete operator in C++?
17. Distinguish between run-time and compile-time polymorphism.
18. Explain concept of constructor overloading.
19. Write rules to define friend function.
20. What is constructor overloading?
21. What is Data Abstraction? Explain in detail.
22. Write down syntax and example to create a class.
23. Differentiate between multiple and multilevel inheritance.
24. What is Destructor? Explain in detail.
25. What is parameterised constructor? Explain working with program.
26. What are the rules for operator overloading?
27. Explain all OOP concepts in detail.