Reg. No: | | | | | | | | | |

G.T.N. ARTS COLLEGE (AUTONOMOUS)

(Affiliated to Madurai Kamaraj University) || (Accredited by NAAC with 'B' Grade)

END SEMESTER EXAMINATION – APRIL 2021

(UNDER OUTCOME BASED EDUCATION (OBE) PATTERN)

Programme: B.Sc., IT **Date: 25.6.2021**
Course Code: 20UITC11 **Time: 2 pm. to 5 pm**
Course Title : Introduction to Programming **Max. Marks :100**

Section – A **[20 x 1 = 20]**

Answer ALL the Questions

		CO(s)	K – Level
1.	Which shell is the default shell used on Linux system? [a] csh [b] sh [c] bash [d] tcsh	CO1	K1
2.	Which command displays a listing of previously entered commands? [a] Commands [b] review [c] history [d] export	CO1	K1
3.	Which command is used to display the unix version [a] uname-r [b] uname-n [c] uname-t [d] kernel	CO1	K1
4.	Which command changes a file's group owner? [a] Cgrp [b] chgrp [c] change [d] group	CO1	K1
5.	The range of unsigned integer numbers will be from _____. [a] 1 to 65,535 [b] 1 to 65,536 [c] 0 to 65,536 [d] 0 to 65,535	CO2	K1
6.	A conditional operator pair _____ is available in C to construct conditional expressions. [a] :? [b] ?= [c] ?: [d] =?	CO2	K1
7.	The _____ statement is a powerful decision-making statement and is used to control the flow of execution of statements. [a] Switch [b] goto [c] if [d] conditional operator	CO2	K1
8.	When we known in advance exactly how many times the loop will be executed, we use a _____ controlled loop. [a] counter [b] sentinel [c] sequential [d] entry	CO2	K1

9. An expression that evaluates to an integral value may be used as a _____. CO3 K1
[a] array name [b] array element [c] subscript [d] superscript

10. _____variables cannot be used with the assignment operator. CO3 K2
[a] String [b] Char [c] Integer [d] Float

11. The default return data type of a function is _____. CO3 K1
[a] char [b] float [c] double [d] int

12. A function can be _____and placed before the main function. CO3 K2
[a] defined [b] initialized [c] call [d] declaration

13. In_____, each member has its own storage location. CO4 K2
[a] structures [b] function [c] union [d] array

14. Each data item is known as structure _____. CO4 K2
[a] variable [b] data type [c] member [d] constant

15. which operator connects the structure name to its member name? CO4 K2
[a] - [b] <- [c] . [d] both b and c

16. Which of the following cannot be a structure member? CO4 K2
[a] Another structure [b] function
[c] array [d] member

17. _____can be used to access and manipulate data stored in the memory. CO5 K2
[a] Variables [b] Pointers [c] Data [d] Value

18. Pointers cannot be used as _____parameters in headers to function definitions. CO5 K2
[a] formal [b] actual [c] global [d] local

19. The function getchar and putchar functions and handle_____ character at a time. CO5 K2
[a] string [b] two [c] zero [d] one

20. The getc is used to read a character from a file that has been opened in _____ mode. CO5 K2
[a] write [b] append [c] read [d] open

Section – B [5 x 6 = 30]

Answer ALL the Questions

		CO(s)	K – Level
21.a)	Illustrate the process states in Linux.	CO1	K2
	[OR]		
21.b)	List File attributes in Linux.	CO1	K1
22.a)	Describe data types in ANSIC.	CO2	K1
	[OR]		
22.b)	Compare while and do…while statements.	CO2	K2
23.a)	Explain the multidimensional array with example.	CO3	K2
	[OR]		
23.b)	Develop a C program using strcmp() and strcpy() functions.	CO3	K2
24.a)	What is structure? How does structure differ from union?	CO4	K3
	[OR]		
24.b)	Explain how to pass structure to function with example	CO4	K3
25.a)	Demonstrate the syntax of closing a file.	CO5	K2
	[OR]		
25.b)	List the basic operation of the file.	CO5	K1

Section – C [5 x 10 = 50]

Answer ALL the Questions

		CO(s)	K – Level
26.a)	Describe the components of Linux system.	CO1	K3
	[OR]		
26.b)	Explain all the I/O redirection commands in Linux.	CO1	K3
27.a)	Define the relational and logical operators with examples.	CO2	K2
	[OR]		
27.b)	Illustrate the Switch statement with example.	CO2	K2
28.a)	Construct C program for call by value and call by reference.	CO3	K3
	[OR]		
28.b)	Describe actual parameters and formal parameters with examples.	CO3	K3

29.a)	Demonstrate union with example.	CO4
	[OR]	
29.b)	Construct nested structures with example.	CO4
30.a)	Explain about the reading and writing string form /to a file.	CO5
	[OR]	
30.b)	Illustrate file and mode of operations.	CO5

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G.T.N. ARTS COLLEGE (AUTONOMOUS)

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END SEMESTER EXAMINATION – NOVEMBER 2020

(UNDER OUTCOME BASED EDUCATION (OBE) PATTERN)

Programme :B.B.A
Course Code:20UITN11
Course Title : Fundamentals of Information Technology

Date: 16.2.2021
Time: 10 am. to 1 pm
Max. Marks :100

Section – A **[20 x 1 = 20]**

Answer ALL the Questions

		CO(s)	K – Level
1.	Which characteristics of computer distinguishes it from electronic calculation? [a] Accuracy [b] Storage [c] Versatility [d]Automatic	CO1	K1
2.	The first computers were programmed using _____. [a] Assembly Language [b] Machine Language [c] Source Code [d] Object Code	CO1	K1
3.	Which of the following statement is true? [a] Minicomputer works faster than Microcomputer [b] Microcomputer works faster than Minicomputer [c] Speed of both the computer is the same [d] The speed of both these computers cannot be compared with the speed of advanced	CO1	K2
4.	_____ Computers operates essentially by counting [a] Portable Computer [b] Hybrid Computer [c] Analog Computer [d] Digital Computer	CO1	K1
5.	The brain of any computer system is _____. [a] ALU [b] CPU [c] None of above [d] Memory	CO2	K1
6.	Which of the following is valid storage types? [a] CPU [b] Keyboard [c] Pen drive [d] Track Ball	CO2	K1
7.	Which of the following is the valid measurement unit of memory? [a] GB [b] MB [c] KB [d] ALL	CO2	K1
8.	The CPU and memory are located on the _____. [a] Expansion Board [b] Mother Board [c] Storage Device [d] Output Device	CO2	K1

9. Which device is used as the standard pointing device in a Graphical user Environment? CO3
[a] Keyboard [b] Mouse
[c] Joystick [d] Track ball

10. Keyboard converts typed in character to _____code CO3
[a] EBCIDIC [b] ASCII [c] Decimal [d] Binary

11. Which of the following devices can be used to diversity image printed text? CO3
[a]OCR [b] OMR [c] MICR [d] All of above

12. _____Printer is the cheapest in terms of price and operating cost CO4
[a] Inkjet [b] Laser [c] Thermal [d] Dot Matrix

13. Software required to run the hardware is known as _____.
[a] Joystick [b] Task Manager
[c] Task Bar [d] Device Driver

14. _____ Consists of set of instruction CO4
[a] Software [b] Hardware [c] Program [d] None of this

15. What is system software? CO4
[a] Word Processing [b] Program Language
[c] Graphics [d] Browser

16. Operating system is _____. CO4
[a] Hardware
[b] Software which manage resources of the system
[c] Software which performs computation
[d] None

17. Any organization's initial web page is known as _____. CO5
[a] Portal [b] Front page [c] Home page [d] Webpage

18. A web page is located using a CO5
[a] Universal Record Linking [b] Universal Resource Locater
[c] Universal Record Locater [d] Universal Reachable Linking

19. HTML documents stored in the file in the form _____. CO5
[a] .hxm [b] .html or .htm [c] .hm [d] hml

20. IP address is currently _____. CO5 K2
[a] 4 Bytes long [b] Available in plenty
[c] 6 bytes long [d] Not assigned as it is all used up

Section – B **[5 x 6 = 30]**

	Answer ALL the Questions	**CO(s)**	**K – Level**
21.a)	Describe the characteristics of a computer	CO1	K1
	[OR]		
21.b)	Compare the microcomputer and minicomputer	CO1	K2
22.a)	Describe the Computer memory	CO2	K1
	[OR]		
22.b)	Summarize the factors affecting processor speed	CO2	K2
23.a)	Classify the printer with examples	CO3	K2
	[OR]		
23.b)	Explain the Web Cams with diagrams	CO3	K2
24.a)	Describe the Software categories with examples	CO4	K1
	[OR]		
24.b)	Compare the compilers and interpreters	CO4	K2
25.a)	Summarize the evolution of internet	CO5	K2
	[OR]		
25.b)	Write about various network topologies.	CO5	K3

Section – C **[5 x 10 = 50]**

	Answer ALL the Questions	**CO(s)**	**K – Level**
26.a)	Describe the anatomy of the computer with examples	CO1	K1
	[OR]		
26.b)	Classify the digital computer systems	CO1	K2
27.a)	Describe the working of CPU and memory	CO2	K1
	[OR]		
27.b)	Explain the Random Access Memory with examples	CO2	K2
28.a)	List out the Input devices with examples.	CO3	K1
	[OR]		
28.b)	Summarize the working principles of system voice recognition.	CO3	K2
29.a)	Explain the hardware and software interaction	CO4	K2
	[OR]		
29.b)	Classify the software with examples	CO4	K2
30.a)	Illustrate the types of network	CO5	K2
	[OR]		
30.b)	Construct web pages using HTML with examples	CO5	K3

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END SEMESTER EXAMINATIONS – APRIL 2021

(UNDER OUTCOME BASED EDUCATION (OBE) PATTERN)

Programme: All UG Courses | **Date: 23.06.2021**
CourseCode: 20UVEV11 | **Time: 2 pm – 5 pm**
CourseTitle: Value Education | **Max. Marks:100**

Section – A **[20 x 1 = 20]**

AnswerALL theQuestions

Qn. No.		CO(s)	K–Level
1.	Self discipline is like a …… [a] Muscle [b] Good faith [c] Personality [d] Initiative சுய ஒழுக்கம் ஒரு …… [a] தசை [b] நல்லநம்பிக்கை [c] ஆளுமை [d] முயற்சி	CO1	K1
2.	……..is the capacity to suggest or make an unbiased and impartial conclusion on an issue or a problem. [a] Wisdom [b] Education [c] Family [d] None of the above ……..ஒரு பிரச்சினை அல்லது பிரச்சினையில் ஒருபக்கச்சார்பற்ற மற்றும் பக்கச்சார்பற்ற முடிவை பரிந்துரைக்கும் அல்லது எடுக்கும் திறன் இது. [a] ஞானம் [b] கல்வி [d] குடும்பம் [d] மேற்கண்டவை எதுவுமில்லை	CO1	K2
3.	…… means feeling of pity for the suffering of others. [a] Wisdom [b] Compassion [c] Discipline [d] Angry …… என்பது மற்றவர்களின் துன்பங்களுக்கு பரிதாபப்படுவது ஆகும். [a] ஞானம் [b] இரக்கம் [c] ஒழுக்கம் [d] கோபம்	CO1	K1
4.	……. means fairness, and truthfulness, and the avoidance of misleading people. [a] Wisdom [b] Courage [c] Honesty [d] discipline …… .. என்றால் நேர்மை, உண்மைத்தன்மை, மக்களை தவறாக வழி நடத்துவதைத் தவிர்ப்பது ஆகும் [a] ஞானம் [b] தைரியம் [c] நேர்மை [d] ஒழுக்கம்	CO1	K2
5.	……means "path that one can follow to achieve the spiritual goal of life. [a] Yoga [b] Karma [c] Soul [d] Self confidence வாழ்க்கையின் ஆன்மீக இலக்கை அடைய ஒருவர் பின்பற்றக் கூடிய …… மீன்கள்" பாதை. [a] யோகா [b] கர்மா [c] ஆத்மா [d] தன்னம்பிக்கை	CO2	K1
6.	…… Sikhs are prohibited from worshipping idols, images or icons [a] Worship [b] Conference [c] Soul [d] None of the above	CO2	K2

..... சிலைகள், உருவங்கள் அல்லது சின்னங்களை வணங்க
சீக்கியர்கள்தடைசெய்யப்பட்டுள்ளனர்.
[a] வழிபாடு [b] மாநாடு [c] ஆத்மா [d] மேற்கண்டவை எதுவுமில்லை

CO2 K1

7. The founder of Sikhism was ----------
[a] Shri Guru Nanak [b] Sri Aravidar
[c] Swami Vivekannda [d] None of the above

சீக்கியமதத்தைநிறுவியவர்----------
[a] ஸ்ரீகுருநானக் [b] ஸ்ரீஅரவிதர்
[c] சுவாமிவிவேகந்தா [d] மேற்கண்டவைஎதுவுமில்லை

CO2 K2

8. ..... is the basic whish clear and comprehensive principle is expressed in the gospel by the worlds.
[a] Christian [b] Jainism [c] Buddhism [d] None of the above

---------- என்பது அடிப்படை மற்றும் தெளிவான மற்றும் விரிவான
கொள்கைசுவிசேஷத்தில் உலகங்களால் வெளிப்படுத்தப்படுகிறது.
[a] ஒருகிறிஸ்தவர் [ஆ] சமணமதம்
[c] பௌத்தம் [d] மேற்கண்டவைஎதுவுமில்லை

CO3 K1

9. .....has become an essential for modern democratic nation states to ensure a strong sense of identification whether the polity based on a commonsense of identity.
[a] Secularism [b] Regionalism
[c] Communication [d] None of the above
நவீனஜனநாயக தேசிய அரசுகள் ஒரு வலுவானதை உறுதிப்படுத்த .....
இன்றியமையாததாகிவிட்டது அடையாளத்தின் பொதுநலத்தை
அடிப்படையாகக்கொண்டஅரசியல் என்பதை அடையாளம் காணும் உணர்வு.
[a] மதச்சார்பின்மை [b] பிராந்தியவாதம்
[c] தொடர்பு [d] மேற்கூறியஎதுவும்இல்லை

CO3 K2

10. Who put forward the word secularism?
[a] Ram Ahuja [b] Abdul Ahamed
[c] Bipin Chandra [d] George Jacob Holyoake
மதச்சார்பின்மை என்ற வார்த்தையை முன்வைத்தவர் யார்?
[அ] ராம்அஹுஜா [பி] அப்துல்அஹமட்
[இ] பிபின்சந்திரா [ஈ] ஜார்ஜ்ஜேக்கப்ஹோலியோக்

CO3 K1

11. .....refers to the process of growth and expansion of cities
[a] Industralisation [b] Urbanisation
[c] Modernisation [d] None of the above
..... நகரங்களின் வளர்ச்சி மற்றும் விரிவாக்க செயல்முறையை
குறிக்கிறது
[a] தொழில்மயமாக்கல் [b] நகரமயமாக்கல்
[c] நவீனமயமாக்கல் [d] மேற்கூறியஎதுவும்இல்லை

CO3 K2

12. .....is one who is culturally, socially, economically and politically suppressed and exploited in the name of religion
[a] Dalith [b] Other backward class
[c] Untouchables [d] None of the above

.... கலாச்சாரரீதியாகவும், சமூகரீதியாகவும்,
பொருளாதாரரீதியாகவும் அரசியல்ரீதியாகவும் அடக்குமுறை கொண்டவர்
மதத்தின் பெயரில் சுரண்டப்படுகிறது
[a] தலித் [b] பிற பின் தங்கியவர்க்கம்
[c] தீண்டத்தகாதவர்கள் [d] மேற்கண்டவை எதுவுமில்லை

13. ---------- invoke team spirit in their members. CO4 K1
[a] Team leader [b] Integrity [c] Honesty [d] None of the above
.....தங்கள் உறுப்பினர்களில் அணித் தூண்டுதலுக்கு
அழைப்புவிடுகிறார்கள்
[a] அணித்தலைவர்கள் [b] நேர்மை
[c] மகிழ்ச்சி [d] மேற்கூறிய எதுவும் இல்லை

14. ..... cannot exist without proper accounting practices. CO4 K2
[a] Team [b] Integrity [c] Honesty [d] Accountability
சரியான கணக்கு நடைமுறைகள் இல்லாமல் ..... இருக்கமுடியாது
[a] குழு [b] நேர்மை [c] நேர்மை [d] பொறுப்புக்கூறல்

15. Integrity is derived from qualities such as honesty and consistency of CO4 K1
.....
[a] Team [b] Integrity [c] Character [d] Accountability
நேர்மை மற்றும் நிலைத்தன்மை .... போன்ற குணங்களிலிருந்து நேர்மை
உருவாகிறது.
[a] குழு [b] நேர்மை [c] தன்மை [d] பொறுப்புக்கூற

16. Who made the classic study India as a secular state? CO4 K2
[a] Shankar Rao [b] Mac Iyer
[c] Page [d] Donald Eugene Smith
கிளாசிக் படிப்பை இந்தியாவை ஒரு மதச்சார்பற்ற நாடாக ஆக்கியது யார்?
[a] ஷங்கர்ராவ் [b] மேக்ஐயர்
[c] பக்கம் [d] டொனால்ட்யூஜின்ஸ்மித்

17. What is the first and most immediate social environment to which a child is exposed? CO5 K1
[a] Family [b] Nuclear family [c] Society [d] both (a) and (b)
ஒரு குழந்தை வெளிப்படும் முதல் மற்றும் உடனடி சமூக சூழல் எது?
[a] குடும்பம் [b] அணுகுடும்பம்
[c] சமூகம் [d] இரண்டும் (அ) மற்றும் (ஆ)

18. Family is a .....group CO5 K2
[a] Social [b] Institution [c] Universal [d] both (a) and (b)
குடும்பம் ஒரு ----------. குழு.
[a] சமூக [b] நிறுவனம் [c] யுனிவர்சல் [d] இரண்டும் (a) மற்றும்

19. In the Industrial Society the family is limited to husband, wife and their children is called _____ CO5 K1
[a] Extended family [b] family [c] Nuclear family [d] None of these
தொழில் துறைசங்கத்தில் குடும்பம்கணவன், மனைவி மற்றும் அவர்களின்
குழந்தைகள் என்று அழைக்கப்படுகிறது.
[a] விரிவாக்கப்பட்டகுடும்பம் [b] குடும்பம்
[c] அணுகுடும்பம் [d] இவைஎதுவுமில்லை

		CO5	K2

20. What is the basic unit of Society?
[a] Marriage [b] Family [c] Kinship [d] None of these
சமூகத்தின் அடிப்படை அலகு என்ன?
[a] திருமணம் [b] குடும்பம் [c] உறவு [d] இவைஎதுவுமில்லை

Section – B

[5x 6 = 30]

Qn. No.	Answer ALL the Questions	CO(s)	K-Level
21.a)	State the importance of Karma Yoga. கர்மயோகத்தின் முக்கியத்துவத்தை தெரிவிக்கவும்	CO1	K3
	[OR]		
21.b)	Discuss the significance of value education. மதிப்புக்கல்வியின் முக்கியத்துவத்தைப் பற்றி விவாதிக்கவும்.	CO1	K3
22.a)	What are the main values of Jainism? சமணமதத்தின் முக்கிய மதிப்புகள் யாவை?	CO2	K3
	[OR]		
22.b)	Discuss the importance of Sikhism. சீக்கிய மதத்தின் முக்கியத்துவத்தைப் பற்றி விவாதிக்கவும்.	CO2	K3
23.a)	State the importance of democracy. ஜனநாயகத்தின் முக்கியத்துவத்தை தெரிவிக்கவும்	CO3	K3
	[OR]		
23.b)	What are the characteristics of secular society? மதச்சார்பற்ற சமூகத்தின் பண்புகள் என்ன?	CO3	K3
24.a)	State the importance of team spirit. குழு ஆவியின்முக்கியத்துவத்தை தெரிவிக்கவும்.	CO4	K3
	[OR]		
24.b)	List out the mass media in value system. மதிப்பு அமைப்பில் வெகு ஜன ஊடகங்களை பட்டியலிடுங்கள்.	CO4 CO5	K3 K3
25.a)	Explain the role of family in value formation. மதிப்பு உருவாக்கத்தில் குடும்பத்தின் பங்கை விளக்குங்கள்..	CO5	K3
	[OR]		
25.b)	State the positive values formed though peer group interactions சக குழு இடைவினைகள் என்றாலும் உருவாக்கப்பட்ட நேர்மறை மதிப்புகளைக் கூறுங்கள்		

Section – C

[5 x 10 = 50]

Qn. No.	Answer ALL the Questions	CO(s)	K-Level
26.a)	Explain the different classification of values. மதிப்புகளின் வெவ்வேறு வகைப்பாட்டை விளக்குங்கள்.	CO1	K2
	[OR]		
26.b)	Explain the types of values. மதிப்புகளின் வகைகளை விளக்குங்கள்.	CO12	K2

27.a)	Discribe the beliefs and practices in Sikhism. சீக்கியமதத்தில் உள்ள நம்பிக்கைகள் மற்றும் நடைமுறைகளை விவரிக்கவும்.	CO2	K2
	[OR]		
27.b)	Trace the reasons for social problems like fundamentalism in India. இந்தியாவில் அடிப்படை வாதம் போன்ற சமூகப்பிரச்சினைகளுக்கான காரணங்களைக் கண்டறியவும்	CO2	K2
28.a)	Explain the political awareness and its levels. அரசியல் விழிப்புணர்வையும் அதன் நிலைகளையும் விளக்குங்கள்.	CO3	K2
	[OR]		
28.b)	Discuss the democratic function in India. இந்தியாவில் ஜனநாயக செயல்பாடு பற்றி விவாதிக்கவும்	CO3	K2
29.a)	Explain accountability and its types. பொறுப்புணர்வு மற்றும் அதன் வகைகளை விளக்குங்கள்.	CO4	K2
	[OR]		
29.b)	Describe the areas of competency. திறனின் பகுதிகளை விவரிக்கவும்	CO4	K2
30.a)	Explain the role of various social institutions in value formation. மதிப்பு உருவாக்கத்தில் பல்வேறு சமூக நிறுவனங்களின் பங்கை விளக்குங்கள்.	CO5	K2
	[OR]		
30.b)	Explain how family helps to inculcate social values among children. குழந்தைகளிடையே சமூக விழுமியங்களை வளர்க்க குடும்பம் எவ்வாறு உதவுகிறது என்பதை விளக்குங்கள்.	CO5	K2

Reg. No.: | | | | | | | | | |

G.T.N. ARTS COLLEGE (AUTONOMOUS)

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END SEMESTER EXAMINATION - APRIL - 2021

(UNDER OUTCOME BASED EDUCATION (OBE) PATTERN)

Programme : B.Sc. Information Technology
Course Code : 20UITC21
Course Title : Programming in C#.NET

Date : 25.06.2021
Time : 10:00 AM - 1:00 PM
Max. Marks : 100

Q. No.	SECTION - A (20 * 1 = 20 Marks) Answer ALL Questions	CO(s)	K - Level
1.	In C#, a subroutine is called a _____. 1.Function 2.Metadata 3.Method 4.Managed code	CO1	K2
2.	The ____ language allows more than one method in a single class. 1.C# 2.J# 3.C++ 4.C	CO1	K2
3.	Which of the following access specifier in C# allows a class to expose its member variables and member functions to other functions and objects? 1.Public 2.Private 3.Protected 4.Internal	CO1	K1
4.	Which of the following converts a type to a Boolean value, where possible in C#? 1.ToBoolean 2.ToSingle 3.ToChar 4.ToDateTime	CO1	K1
5.	Inheritance is _____ in nature 1.Commutative 2.Associative 3.Transitive 4.Iterative	CO2	K2
6.	The theory of _____ implies that user can control the access to a class, method, or variable. 1.Data hiding 2.Encapsulation 3.Information Hiding 4.Polymorphism	CO2	K2
7.	_____ parameters are used to pass results back to the calling method 1.Input 2.Reference 3.Value 4.Output	CO2	K1
8.	Multidimensional arrays are sometimes called _____ Arrays. 1.Square 2.Triangular 3.Rectangular 4.Cube	CO2	K1
9.	What is the wild card character in the SQL "like" statement? 1.* (Asterisk) 2.# (Pound) 3.% (Percent) 4.$ (Dollar)	CO3	K2

10. _____ is used to store multiple data types — CO3 K2

1.System.String 2.System.Array

3.System.Maths 4.System.Strore

11. The controls available in the tool box of the _____ are used to create the user interface of a web based application. — CO3 K1

1.Microsoft visual studio IDE 2.Application window

3.Web forms 4.None of the above

12. In Microsoft Visual Studio, _____ technology and a programming language such as C# is used to create a Web based application. — CO3 K1

1.JAVA 2.J#

3.VB.NET 4.ASP.NET

13. A Constructor — CO4 K2

1.is used to create objects 2.must have the same name as the class it is not declared within

3.Is not a method of a class 4.Overriding method

14. Which of the following .NET components can be used to remove unused references from the managed heap? — CO4 K2

1.Class Loader 2.Garbage Collector

3.CTS 4.CLR

15. Different ways a method can be overloaded in C#.NET — CO4 K1

1.Different parameter data types 2.No order of parameters

3.No number of parameters 4.Not a number of parameters

16. A variable which is declared inside a method is called a_____variable — CO4 K1

1.Local 2.Private

3.Static 4.Serial

17. A____block enclose the code that could throw an exception. — CO5 K2

1.Try 2.Catch

3.Exception 4.Error

18. To output the value of multidimensional array, Console.WriteLines(___) — CO5 K2

1.myArray[1][3] 2.myArray[1.3];

3.myArray{1}{3}; 4.myArray(1),(3);

19. Find any errors in the following BankAccount constructor: Public int BankAccount() { balance = 0; } — CO5 K1

1.Name 2.Formal parameters

3.Return type 4.No errors

20. A variable declared inside a method is called a_____variable — CO5 K1

1.Static 2.Private

3.Local 4.Serial

Q. No

	Answer ALL Questions		Level
21. (a)	Recall Save File Dialog Box in C#.	CO1	K1
	[OR]		
(b)	Define C# dialog box?	CO1	K2
22. (a)	State conditional operator and give example.	CO1	K1
	[OR]		
(b)	Describe how Encapsulation is implemented by using access specifiers	CO2	K2
23. (a)	Explain Operator Overloading with an example program	CO3	K2
	[OR]		
(b)	Report access modifiers in c#?	CO3	K3
24. (a)	Illustrate a form in c#.net using datetimepicker and diplay todays date in a textbox in string	CO4	K2
	[OR]		
(b)	Write a C# program to shows a simple operation using a progressbar	CO4	K3
25. (a)	Explain how to create a blank file in the disk if the same file already exists	CO5	K2
	[OR]		
(b)	Write a program in C# Sharp to append some text to an existing file.	CO5	K3

Q. No.	SECTION - C (5 * 10 = 50 Marks) Answer ALL Questions	CO(s)	K - Level
26. (a)	State the dot net framework architecture with neat diagram	CO1	K1
	[OR]		
(b)	Explain the process of handling events through delegates	CO1	K2
27. (a)	Recall sort() and reverse() method with the help of sample program	CO2	K1
	[OR]		
(b)	Discuss how to accept two strings and perform the following operations : Copy string 2 to string 3	CO2	K2
28. (a)	Define multiple inheritances? Explain by giving examples.	CO3	K1
	[OR]		
(b)	Report the difference between method overriding and method overloading?	CO3	K2
29. (a)	Explain how to use a timer to write some text to a text file for each seconds once the Start button is clicked then the application stops writing to the text file once the Stop button is clicked.	CO4	K2
	[OR]		
(b)	Write a student result form to publish the grade for total marks of M1,M2,M3 as input	CO4	K3
30. (a)	Describe events and controls	CO5	K2
	[OR]		
(b)	Write a program in C# Sharp to read a specific line from a file.	CO5	K3

****

_____ defines structures and process of operational systems both internal and external to enterprise.

1.Document modelling
2.Transformation
3.synthesizing
4.Business modelling

CO3 K2

10. _____ standard was meant to be the universal answer to email interconnectivity

1.X.400
2.X.435
3.X.300
4.X.434

CO3 K2

11. EDI messages have a common structure

1.Transaction set
2.Data segments
3.Data elements
4.All of the above

CO2 K2

12. _____is a distributed file ,management system programs to access and send information

1.WWW
2.ISP
3.SSP
4.None

CO5 K1

13. An electronic check is one form of what?

1.e-commerce
2.online banking
3.e-cash
4.check

CO4 K2

14. _____ is the least interfering model but requires active search on the part of the customer

1.Catalog model
2.Menu Model
3.CRM Model
4.E-Model

CO4 K2

15. _____defines the structures and processes of the business environment both internal and external to the enterprise

1.Document modelling
2.Transformation
3.Synthesizing
4.Business modelling

16. ---------- creates modules fro capturing, validating, transforming and applying key operational concepts

1.Document modelling
2.Transformation
3.synthesizing
4.Business modelling

CO4 K

17. The _____ while designing and developing cross a number of application boundaries.

1.software agent
2.design agent
3.development agent
4.software

CO5 K

18. _____ environment to allow real-time

1.network
2.server
3.offline
4.virtual

CO5 K

19. _____ is only permissible with the prior written permission.

1.downloading
2.uploading
3.networking
4.file

CO5 K

20. What type of ad appears on top of a web page?

CO5 K

1.pop-under ad 2.banner ad

3.pop-up ad 4.discount ad

Q. No.	SECTION - B (5 * 6 = 30 Marks) Answer ALL Questions	CO(s)	K - Level
21. (a)	Define the term E-Commerce.	CO1	K1
	[OR]		
(b)	Define Supply chain Management	CO1	K1
22. (a)	Define Modem Functions.	CO2	K1
	[OR]		
(b)	Illustrate Uniform Resource Locators(URL)	CO2	K2
23. (a)	Describe Value-Added Networks(VANS)	CO3	K1
	[OR]		
(b)	Explain about how to Develop EDI envelope for message.	CO3	K2
24. (a)	Classify Structured documents	CO4	K2
	[OR]		
(b)	Summarize the Types of Data Warehouses.	CO4	K2
25. (a)	Discover the digital signature of pdf documents	CO5	K1
	[OR]		
(b)	Illustrate about constructing Software Agent Methods	CO5	K1

Q. No.	SECTION - C (5 * 10 = 50 Marks) Answer ALL Questions	CO(s)	K - Level
26. (a)	Describe Electronic Commerce Organization Applications.	CO1	K1
	[OR]		
(b)	Enumerate Network Access Equipments with example.	CO1	K1
27. (a)	Define Electronic commerce frameworks.	CO2	K1
	[OR]		
(b)	Describe about Internet Service Providers.	CO2	K2
28. (a)	Explain about Purchase presentation phase.	CO3	K2
	[OR]		
(b)	Enumerate Consumer-Oriented Applications.	CO3	K1
29. (a)	Explain How credit cards are used for electronic transactions.	CO4	K1
	[OR]		
(b)	Explain about EDI and its architecture and functions.	CO4	K2
30. (a)	Explain Software Agents and Characteristics of agents.	CO5	K2
	[OR]		
(b)	Write about how to Construct Information Filtering with examples.	CO5	K3

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END SEMESTER EXAMINATION - APRIL - 2021

(UNDER OUTCOME BASED EDUCATION (OBE) PATTERN)

Programme : ALL UNDERGRADUATE STUDENTS | **Date : 23.06.2021**

Course Code : 20UEGS21 | **Time : 10:00 AM - 1:00 PM**

Course Title : Environment and Gender Studies | **Max. Marks : 100**

Q. No.	SECTION - A (20 * 1 = 20 Marks) Answer ALL Questions	CO(s)	K - Level
1.	World environmental day is celebrated on ---------. உலக சுற்றுச்சூழல் கொண்டாடப்படும் தினம் 1.March மார்ச் 15 2.April ஏப்ரல் 15 3.May மே 5 4.Juneஜூன் 5	CO1	K2
2.	_____ is the gaseous envelope of the Earth. _____ என்பது பூமியின் வாயு உறை. 1.Atmosphereவளிமண்டலம் 2.Hydrosphereஹைட்ரோஸ்பியர் 3.Lithosphereலித்தோஸ்பியர் 4.Biosphereஉயிர்க்கோளம்	CO1	K1
3.	Water moves through the hydrosphere is known as the ---------- cycle. நீர் நிலை வழியாக நீர் நகரும் இது---------- சுழற்சி என அழைக்கப்படுகிறது. 1.Cloudமேகம் 2.Sand மணல் 3,Hydrologicஹைட்ரோலஜிக் 4.Habitatவாழ்விடம்	CO1	K2
4.	Educating the people on Environment and its impact is called ---------- Education சுற்றுச்சூழல் மற்றும் அதன் தாக்கம் குறித்து மக்களுக்கு கற்பித்தல் ---------- கல்வி என்று அழைக்கப்படுகிறது 1.Studyபடிப்பு 2.Environmental சுற்றுச்சூழல் 3.Scienceஅறிவியல் 4.Family குடும்பம்	CO1	K1
5.	The occurrence of a species in a small area and nowhere else in the world is called ஒரு சிறிய பகுதியில் மற்றும் உலகில் வேறு எங்கும் ஒரு இனத்தின் நிகழ்வு ---------- என்று அழைக்கப்படுகிறது 1.Endemismஎண்டெமிசம் 2.Isolatismதனிமை 3.Rareismஅரிதானவாதம் 4.Atomismஅணுவாதம்	CO2	K1
6.	Among plants, ---------- constitute the largest number of species in the world. தாவரங்களில், ---------- உலகிலேயே அதிக எண்ணிக்கையிலான இனங்கள் உள்ளன. 1.Algaeபாசி 2.Bryophytesபிரையோபைட்டுகள் 3.Gymnospermsஜிம்னோஸ்பெர்ம்ஸ் 4.Angiosperms ஆஞ்சியோஸ்பெர்ம்ஸ்	CO2	K2
7.	Whiskey is prepared from ---------- ---------- இருந்து விஸ்கி தயாரிக்கப்படுகிறது	CO2	K1

1.Grapesதிராட்சை

2.Peach, Apple and Orangeபீச், ஆப்பிள் மற்றும் ஆரஞ்சு

3.Corn, Rye and Malt சோளம், கம்பு மற்றும் மால்ட்

4.Cane, Beet and Molasses கரும்பு மற்றும் பீட் மோலாஸ்கள்

8. Quinine is obtained from
குயினின் இதில் இருந்து பெறப்படுகிறது___ CO2 K2

1.Chinchona treeசின்சோனா மரம்

2.Black pepper கருமிளகு

3.Garlicபூண்டு

4.Sugarcaneகரும்பு

9. Which of the following kinetic energy is converted into electrical energy? CO3 K1
பின்வரும் எந்த இயக்க ஆற்றல் மின் சக்தியாக மாற்றப்படுகிறது?

1.Tidal energy அலை ஆற்றல்

2.Wind energyகாற்று ஆற்றல்

3.Hydro energyநீர் ஆற்றல்

4.All of theseஇவை அனைத்தும்

10. Which of the following produces energy because of temperature difference at various levels in ocean? CO3 K2
கடலில் பல்வேறு நிலைகளில் வெப்பநிலை வேறுபாடு இருப்பதால் பின்வருவனவற்றில் எது ஆற்றலை உருவாக்குகிறது?

1.Tidal energyஅலை ஆற்றல்

2.Wave energyஅலை ஆற்றல்

3.Solar energy சூரிய சக்தி

4.Ocean thermal energyபெருங்கடல் வெப்ப ஆற்றல்

11. Which of the following is the odd one out? CO3 K1
பின்வருவனவற்றில் மாறுபட்டவை எது?

1.Petroleumபெட்ரோலியம்

2.Hydro electricityநீர் மின்சாரம்

3.Coalநிலக்கரி

4.CNGசி.என்.ஜி.

12. Which method is used to produce electricity in hydroelectric power plant? CO3 K2
நீர் மின் நிலையத்தில் மின்சாரம் தயாரிக்க எந்த முறை பயன்படுத்தப்படுகிறது?

1.By boiling the water to produde steamநீராவி தயாரிக்க தண்ணீரை கொதிக்க வைப்பதன் மூலம்

2.By running dynamoதண்ணீரை அயனியாக்கம் செய்வதன் மூலம்

3.By ionizing waterஇயக்க ஆற்றலால் டைனமோவை இயக்குவதன் மூலம்

4.Any of the aboveமேலே உள்ள ஏதேனும்

13. Identify the environmental problem caused by Computer Industry CO4 K1
கணினி துறையால் ஏற்படும் சுற்றுச்சூழல் பிரச்சினையை அடையாளம் காணவும்

1.By not providing jobs to humansமனிதர்களுக்கு வேலை வழங்காததன் மூலம்

2.By modern technologies like ICT,block chainsஐ.சி.டி, பிளாக் சங்கிலிகள் போன்ற நவீனதொழில்நுட்பங்களால்

3.By printing unnecessary large amount of filesதேவையற்ற பெரிய அளவு கோப்புகளை அச்சிடுவதன் மூலம்.

4.By making people lazyமக்களை சோம்பேறிகளாக்குவதன் மூலம்.

14. Organic Agriculture advocates avoiding the use of _____ CO4 K1
கரிம வேளாண்மை _____ பயன்பாட்டை தவிர்க்க

1.Organic Manureகரிம உரம்

2.Stored Waterசேமிக்கப்பட்ட நீர்

3.Modern Techniques in harvestingஅறுவடையில் நவீன நுட்பங்கள்

4.Chemical Fertilizersஇரசாயன உரங்கள்

15. Which one of the following is the prime factor towards Soil pollution? CO4 K2
மண் மாசுபாட்டிற்கான பிரதான காரணி பின்வருவனவற்றில் எது?

1.Soil erosionமண் அரிப்பு

2.Floodsவெள்ளம்

3.Dumping of Industrial wastesதொழில்துறை கழிவுகளை கொட்டுதல்

4.Using land for irrigationபாசனத்திற்காக நிலத்தைப் பயன்படுத்துதல்

16. Find the major non renewable energy usage in India CO4 K2
இந்தியாவில் புதுப்பிக்க முடியாத முக்கிய எரிசக்தி பயன்பாட்டைக் கண்டறியவும்

1.Coalநிலக்கரி

2.Petroleum products பெட்ரோலிய பொருட்கள்

3.Natural gases இயற்கை வாயுக்கள்

4.Nuclearஅணு

17. According to Census of India 2011, literacy rate of females is _____ compared to males which is 82.14%. CO5 K1
இந்திய மக்கள்தொகை கணக்கெடுப்பின்படி, பெண்களின் கல்வியறிவு விகிதம் ஆண்களுடன் ஒப்பிடும்போது _____ ஆகும், இது 82.14% ஆகும்.

1.65.46%

2.66.12%

3.67%

4.73.21%

18. Who first used the term gender? CO5 K2
பாலினம் என்ற வார்த்தையை முதலில் பயன்படுத்தியவர் யார்?

1.Robert Stollerராபர்ட்ஸ்டோலர்

2.Sigmund Freud சிக்மண்ட்பிராய்ட்

3.Karl Jungகார்ல்ஜங்

4.Judith Butlerஜூடித்பட்லர்

19. Gender identity is usually formed by age of _____. CO5 K2
பாலினஅடையாளம்பொதுவாக _____ வயதில்உருவாகிறது.

1.Fiveஐந்து

2.Sixஆறு

3.Threeமூன்று

4.Fourநான்கு

20. _____ is defined as a personal conception of oneself as male or female (or rarely, both or neither). CO5 K1

_____ தன்னைஆண்அல்லதுபெண் (அல்லதுஅரிதாக, இரண்டும்அல்லதுஇல்லை)
என்றதனிப்பட்டகருத்தாகவரையறுக்கப்படுகிறது.

1.Gender Identity
பாலினஅடையாளம்

2.Gender roles
பாலினபாத்திரங்கள்

3.Gender discrimination
பாலினபாகுபாடு

4.Gender equalityபாலினசமத்துவம்

Q. No.	SECTION - B (5 * 6 = 30 Marks) Answer ALL Questions	CO(s)	K. Level
21. (a)	Explain the Global Warming. புவி வெப்பமாவதை பற்றி விவரிக்கவும்.	CO1	K1
	[OR]		
(b)	What is meant by Acid rain? அமிலமழை என்றால் என்ன?	CO1	K1
22. (a)	Write a short note on Food Chain. உணவு சங்கிலி பற்றி குறிப்பு எழுதுக	CO2	K2
	[OR]		
(b)	Explain the abiotic components of an Eco system. சுற்றுச்சூழல் அமைப்பில் உயிரற்ற காரணிகளை விளக்குக	CO2	K2
23. (a)	Explain briefly about Renewable energy resources. புதுப்பிக்கத்தக்க எரிசக்தி வளங்களைப் பற்றி சுருக்கமாக விளக்குக.	CO3	K2
	[OR]		
(b)	Summarize the advantages and disadvantage of wind conservation system. காற்றாலை பாதுகாப்பு அமைப்பின்நன்மைகள் மற்றும் தீமைகளை சுருக்கமாகக் விளக்குக.	CO3	K2
24. (a)	Compare Renewable energy resources and Non – Renewable energy resources. புதுப்பிக்கத்தக்க எரிசக்தி வளங்களையும் புதுப்பிக்க முடியாத ஆற்றல் வளங்களையும் ஒப்பிடுக	CO4	K2
	[OR]		
(b)	What is Environmental pollution? State its causes. சுற்றுச்சூழல் மாசுபாடு என்றால் என்ன? அதன் காரணங்களைக் கூறுக	CO4	K2
25. (a)	What are the steps we can take to end Gender inequality? பாலினசமத்துவமின்மையைமுடிவுக்குக்கொண்டுவரநாம்எடுக்கக்கூடியநடவடிக்கை என்ன?	CO5	K2
	[OR]		
(b)	Write down three ways to liberate the LGBTQ+ in your country. உங்கள்நாட்டில் LGBTQ + ஐ விடுவிக்க மூன்று வழிகளை எழுதுக.	CO5	K2

Q. No.	SECTION - C (5 * 10 = 50 Marks) Answer ALL Questions	CO(s)	K. Level
26. (a)	Explain the components of Environment சுற்றுச் சூழலின் கூறுகள் பற்றி விளக்குக	CO1	K1
	[OR]		
(b)	Explain Global warming and Ozone layer depletion. புவி வெப்பமடைதல் மற்றும் ஓசோன் அடுக்கு குறைவு ஆகியவற்றை விளக்குக	CO1	K1
27. (a)	Explain the energy flow in an ecosystem.	CO2	K2

ஒரு சுற்றுச்சூழல் அமைப்பில் ஆற்றல் ஓட்டத்தை விளக்கு.

[OR]

(b)	Explain the conservation of wild life. வனவிலங்குகளின் பாதுகாப்பை விளக்கு.	CO2	K2
28. (a)	Describe petroleum resource, oil shale and tar sands. பெட்ரோலியவள, எண்ணெய் ஷேல் மற்றும் தார் மணல் ஆகியவற்றை பற்றி விளக்குக.	CO3	K2

[OR]

(b)	Discuss the impacts of Coal mining and burning. நிலக்கரி சுரங்க மற்றும் அதன் எரியும் தாக்கங்களைப் பற்றி விளக்குக.	CO3	K2
29. (a)	Illustrate theEenvironmental laws in India to protect Environment. இந்தியாவில் சுற்றுச்சூழலைப் பாதுகாக்கும் சுற்றுச்சூழல் சட்டங்களை பற்றி விளக்குக	CO4	K2

[OR]

(b)	Enumerate the different types of natural resources. பல்வேறு வகையான இயற்கை வளங்களை பற்றி கணக்கிடுக.	CO4	K2
30. (a)	Explain the following terms. 1. Gender identity 2. Gender roles 3. Gender discrimination 4. Gender inequality பின்வரும் விதிமுறைகளை விளக்குக. 1. பாலின அடையாளம் 2. பாலின பாத்திரங்கள் 3. பாலின பாகுபாடு 4. பாலின சமத்துவமின்மை	CO5	K2

[OR]

(b)	Write down three of the examples of gender inequality and gender discrimination you come across in your daily life. உங்கள் அன்றாட வாழ்க்கையில் நீங்கள் காணும் பாலின சமத்துவமின்மை மற்றும் பாலின பாகுபாட்டின் மூன்று எடுத்துக்காட்டுகளை எழுதுக.	CO5	K2

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G.T.N. ARTS COLLEGE (AUTONOMOUS)

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END SEMESTER EXAMINATION – APRIL 2021

(UNDER OUTCOME BASED EDUCATION (OBE) PATTERN)

Programme : B.C.A/CS/IT | **Date: 26.6.2021**
Course Code: 20UMAA22 | **Time: 10 am. to 1 pm.**
Course Title : OPERATIONS RESEARCH | **Max. Marks: 100**

Section – A

Answer ALL the Questions (20x1=20)

Qn. No.		CO(s)	K – Level
1.	Each constraint in an LPP model is expressed as an _____. [a] inequality with ≥ sign [b] inequality with ≤ sign [c] equation with = sign [d] All of the above	CO1	K1
2.	Generally operation research is used for _____ [a] Scientific approach [b] decision making [c] solution [d] variables	CO1	K2
3.	The linear function $Z = c_1x_1 + c_2x_2 + \ldots\ldots\ldots + c_nx_n$ which is to be minimized (or maximize[d] is called the _____ of the general LPP. [a] linear programming problem [b] objective function [c] constraints [d] limitations	CO1	K1
4.	The constraints in LPP model becomes redundant because [a] two profit lines may be parallel to each other [b] The solution is unbounded [c] This constraint is not satisfied the solution [d] all the above	CO1	K2
5.	Any feasible solution which optimizes the objective function of a general LPP is called _____. [a] feasible solution [b] objective function [c] constraints [d] Optimum solution	CO2	K1

6. The general LPP is in standard form if _____. CO2 K1
[a] the constraint are strict equations
[b] the constraints are inequalities of $\leq$ type
[c] the constraints are inequalities of $\geq$ type
[d] the decision variables are unrestricted in sign

7. Using graphical method, the optimum solution of the LPP of maximizing $z = 10x + 15y$ subject to _____. CO2 K2
$2x + y \leq 26$, $x + 2y \leq 28$, $y - x \leq 5$ and $x \geq 0, y \geq 0$ is obtained as
[a] $x = 8$ and $y = 10$
[b] $x = 6$ and $y = 1$
[c] $x = 6$ and $y = 10$
[d] $x = 8$ and $y = 8$

8. Decision variables in an OR model are _____. CO2 K1
[a] controllable
[b] uncontrollable
[c] parameters
[d] constants

9. The signal for optimality in a maximum model is _____. CO3 K1
[a] $z_j - c_j \leq 0$, for all j
[b] $z_j \leq 0$
[c] $z_j - c_j \geq 0$ for all j
[d] $z_j - c_j = 0$

10. For a maximization problem, the objective function coefficient for an artificial variable is _____. CO3 K1
[a] $+M$
[b] $-M$
[c] zero
[d] none of the above

11. If an optimum solution is degenerate, then _____. CO3 K2
[a] the solution is infeasible
[b] there are alternative optimum solutions
[c] the solution is of no use to the decision maker
[d] none of the above

12. At an iteration of the usual simplex method, if there is at least one basic variable in the basis at zero level and all $(z_j - c_j) \geq 0$, the current solution is _____. CO3 K2
[a] infeasible
[b] unbounded
[c] non- degenerate
[d] Degenerate

13. In a transportation problem North-West corner rule would yield: CO4 K1
[a] An optimum solution
[b] An initial feasible solution
[c] A Vogel's approximate solution
[d] A minimum cost solution

14. The solution to a transportation problem with m-rows and n-columns is feasible if number of positive allocations are — CO4 — K1

[a] $m + n$ [b] $m * n$

[c] $m + n - 1$ [d] $m + n + 1$

15. The dummy source or destination in a transportation problem is added to _____. — CO4 — K2

[a] satisfy rim condition

[b] prevent solution from becoming degenerate

[c] ensure that total cost does not exceed a limit

[d] all of the above

16. In a transportation problem, the materials are transported from three plants to 5 warehouses. The basis of feasible solution must contain exactly, which one of the following are allocated cells? — CO4 — K2

[a] 3 [b] 5 [c] 7 [d] 8

17. An assignment problem _____. — CO5 — K1

[a] Is unbalanced when each of the given workers cannot do each of the given jobs

[b] May not be balanced if the number of jobs matches with number of workers

[c] Can be balanced by introducing a dummy row or dummy column

[d] can be balanced by introducing dummy rows as well as dummy columns

18. In an assignment problem involving four workers and three jobs, total number of assignments possible are _____ — CO5 — K1

[a] 4 [b] 3 [c] 7 [d] 12

19. If there were n worker, n jobs _____. — CO5 — K2

[a] n solutions [b] $n!$ solutions

[c] $(n-1)!$ solutions [d] (n^n) solutions

20. For a salesman who has to visit N cities, following are the way of his tour plan _____. — CO5 — K2

[a] n [b] $n!$

[c] $(n+1)!$ [d] $(n-1)!$

Section – B

Answer ALL the Questions (5 x 6 = 30)

Qn. No.			CO(s)	K – Level
21.	a)	Discuss Scientific methods in OR?	CO1	K1
		[OR]		
21.	b)	State three OR models which have wide Commercial application?	CO1	K2
22.	a)	Write short notes on slack and surplus variables?	CO2	K1
		[OR]		
22.	b)	Solve graphically the LPP Maximize $z = x_1 + x_2$ subject to $5x_1 + 3x_2 \leq 15$ $x_1 + x_2 \geq 6$ $x_1, x_2 \geq 0$	CO2	K3
23.	a)	Write the algorithm of simplex Method.	CO3	K1
		[OR]		
23.	b)	Using simplex method solve the LPP. Maximize $z = 25x_1 + 20x_2$ subject to $16x_1 + 12x_2 \leq 100$ $8x_1 + 16x_2 \leq 80$ $x_1, x_2 \geq 0$	CO3	K3
24.	a)	Transportation problem whose cost matrix and rim requirements are given in the following tables	CO4	K2

	D_1	D_2	D_3	D_4	Capacity
O_1	1	2	3	4	6
O_2	4	3	2	0	8
O_3	0	2	2	1	10
Demand	4	6	8	6	24

		[OR]			
24.	b)	Using Vogel's approximation method, obtain the initial basic feasible solution of the transportation problem whose cost matrix and rim requirements are given in the following table:	CO4	K3	

	A_1	A_2	A_3	Supply
P_1	2	7	4	5
P_2	3	3	1	8
P_3	5	4	7	7
P_4	1	6	2	14
Demand	4	2	2	34

25.	a)	Three jobs j_1, j_2, j_3 are to be assigned to three machines M_1, M_2, M_3. The processing costs are given in the cost matrix form as shown below. Find the assignment, which will minimize the overall processing cost.	CO5	K3	

	M_1	M_2	M_3
j_1	19	28	31
j_2	11	17	16
j_3	12	15	13

[OR]

25. b) A company has three jobs to be done on three machines. Each job must be done on one and only machines. The cost of each job on each machine is given in the following table. CO5 K3

Given the job assignment, which will minimize the cost?

	A	B	C
X	4	6	8
Y	2	3	4
Z	4	8	5

Section – C

Qn. No.		**Answer ALL the Questions (5x10=50)**	**CO(s)**	**K – Level**
26.	a)	Explain how to classify the models in operations research?	CO1	K1
		[OR]		
26.	b)	Explain the scope of OR.	CO1	K2
27.	a)	A tailor wants to stitch 3 types of woolen coats say A,B,C for which he uses three colors of woolen cloths red, green, blue. Type A coat needs 2 feet of red woolen cloth and 3 feet of blue woolen cloth, Type B coat needs 3 feet of red woolen cloth and 2 feet of each green and blue woolen cloth, Type C coat needs 5 feet green woolen cloth and 1 foot of blue woolen cloth the tailor has only a stock of 8 feet of red woolen cloth and 10 feet of green woolen cloth and 15 feet of blue woolen cloth, He will get an income of Rs. 100 from each Type A coat and Rs.200 from each Type B coat and Rs. 150 from each Type C coat. T he problem is to be determine how the tailor should make use of the available of the available materials show as to maximize the total income from finished woolen coats. Formulate the above problem as an LPP.	CO2	K2
		[OR]		
27.	b)	Solve the following LPP Graphically Maximize $z = 20x_1 + 30x_2$ subject to	CO2	K3
28.	a)	Write the iterative procedure algorithm for Big-M method	CO3	K2
		[OR]		

28. b) Using simplex method solve the LPP. CO3 K3

Maximize $z = x_1 - 3x_2 + 2x_3$ subject to

$3x_1 - x_2 + 2x_3 \leq 7$

$-2x_1 + 4x_2 \leq 12$

$-4x_1 + 3x_2 + 8x_3 \leq 10$

$x_1, x_2, x_3 \geq 0$

29. a) Using VAM find an initial basic feasible solution for the optimum distribution to maximize the transportation cost for the following TP CO4 K3

	F_1	F_2	F_3	F_4	capacity
W_1	15	51	42	33	23
W_2	80	42	26	81	44
W_3	90	40	66	60	33
Requirement	23	31	16	30	100

[OR]

29. b) Solve the following Transportation problem CO4 K3

	C	D	E	Availability
A	3	7	3	6
B	2	3	9	8
Requirement	4	7	3	14

30. a) Explain Hungarian algorithm for solving assignment problem. CO5 K3

[OR]

30. b) A bus renting company has one bus at each of the five sheds S_1, S_2, S_3, S_4, S_5. A customer in each of the five places P_1, P_2, P_3, P_4 and P_5 requires a bus for a tour. the distance in k.m between tbe sheds and places where the customers are live are given in the following distance matrix . How should the buses be assigned to the customers so as to minimize the distance travelled? Find also the minimum distance travelled by the buses, CO5 K3

	P_1	P_2	P_3	P_4	P_5
S_1	10	5	13	15	16
S_2	3	9	18	13	6
S_3	10	7	2	2	2
S_4	5	11	9	7	12
S_5	7	9	10	4	12

Internal Academic Audit 2020-21
Verified
17/08/24
Dr. Boopathy

2. Verified
17.8.2021
R. Santhini Rajeswari
Asst. Prof

(3)
17.08

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DEPARTMENT OF INFORMATION TECHNOLOGY

EXTERNAL QUESTION PAPER(ODD)

2020–2021

4

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END SEMESTER EXAMINATION – NOVEMBER 2020

Programme : B. Sc. Mathematics **Date : 10.01.2021**
Course Code: 17UCSA11/17UITA11/17UCAA11 **Time: 10 am. to 1 pm.**
Course Title : Discrete Mathematics **Max Marks :75**

SECTION – A **[10 X 1 = 10]**

Answer ALL the Questions.

Choose the Correct Answer.

1. The number of subsets of a set with 4 elements is _____.

   [a] 4 [b] 8

   [c] 16 [d] 32

2. If $A = \{8,4,6\}$ and B= $\{5,3,7\}$ then $B \backslash A$ is _____.

   [a] $\emptyset$ [b] $\{8,4,6\}$

   [c] $\{5,3,7\}$ [d] $\{3,4,5,6,7,8\}$

3. If P: Asha is smart, Q: Veena is smart, then the symbolic form of the statement "It is not true that Asha and Veena are both smart" is _____.

   [a] $\neg(P \rightarrow Q)$ [b] $\neg(P \wedge Q)$

   [c] $\neg P \wedge \neg Q$ [d] $\neg(Q \rightarrow P)$

4. If P: Triangle ABC is equilateral and Q: Triangle ABC is equiangular then $P \leftrightarrow Q$ is _____.

   [a] If triangle ABC is equilateral then triangle ABC is equiangular.

   [b] If triangle ABC is equiangular then triangle ABC is equilateral.

[c] Triangle ABC is equilateral if and only if triangle ABC is equiangular.

[d] Triangle ABC is equilateral and triangle ABC is equiangular.

5. The recurrence relation for the sequence $D(n) = 2n + 9$ is _____.

[a] $D(n) - D(n-1) = 2\ \forall n \geq 1$ with $D(0) = 9$

[b] $D(n) + 2D(n-1) = 0\ \forall n \geq 1$ with $D(0) = 9$

[c] $D(n) - 2D(n-1) = 0\ \forall n \geq 1$ with $D(0) = 9$

[d] $D(n) + D(n-1) = 2\ \forall n \geq 1$ with $D(0) = 9$

6. The order of recurrence relation $T(n) = 2(T(n-1))^2 - nT(n-2)$ is _____.

[a] 1 [b] 2

[c] 3 [d] 4

7. The square matrix A is a skew symmetric matrix if _____.

[a] $A = A^T$ [b] $A = -A^T$

[c] $A = (A^T)^T$ [d] $A = (A^T)^{-1}$

8. If a, b are the eigen value of A then eigen values of A^m are _____.

[a] a^m, b^m [b] $\frac{1}{a^m}, \frac{1}{b^m}$

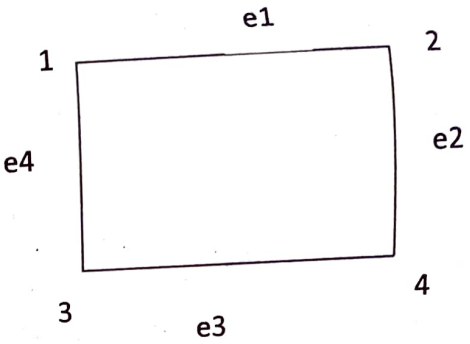
[c] $\frac{b}{a^m}, \frac{a}{b^m}$ [d] $a^m + b^m, a^m - b^m$

9. The number of edges in the complete graph K_4 is _____.

[a] 2 [b] 4

[c] 6 [d] 8

10. The adjacency matrix of the graph G is _____.



[a] $\begin{pmatrix} 0 & 1 & 1 & 0 \\ 1 & 0 & 0 & 1 \\ 0 & 0 & 0 & 1 \\ 0 & 1 & 1 & 0 \end{pmatrix}$

[b] $\begin{pmatrix} 0 & 0 & 1 & 0 \\ 1 & 0 & 0 & 0 \\ 1 & 0 & 0 & 1 \\ 0 & 1 & 1 & 0 \end{pmatrix}$

[c] $\begin{pmatrix} 0 & 1 & 1 & 0 \\ 1 & 0 & 0 & 1 \\ 1 & 0 & 0 & 1 \\ 1 & 0 & 1 & 0 \end{pmatrix}$

[d] $\begin{pmatrix} 0 & 1 & 1 & 0 \\ 1 & 0 & 0 & 1 \\ 1 & 0 & 0 & 1 \\ 0 & 1 & 1 & 0 \end{pmatrix}$

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) State and prove the De Morgan's Laws.

[OR]

b) If $A$and B are two sets then prove that (i) $A - B = A \cap B'$.

(ii) $A - B = A \Leftrightarrow A \cap B = \theta$.

12. a) Draw the parsing tree for the formula $\big(((\neg p) \to (p \wedge q)) \wedge (\neg(p \to q))\big)$.

[OR]

b) Prove that $(p \to q) \Rightarrow (\neg q \to \neg p)$.

13. a) Solve $D(n) - 8D(n-1) + 16D(n-2) = 0$ where $D(2) = 16, D(3)=80$.

[OR]

b) For the sequence defined by $A(k) = k^2 - k,\ k \geq 0,$ obtain the recurrence relation of order two if A is a sequence of integers.

14. a) Verify whether the following system is consistent.

$x + 2y + z = 11,\ 4x + 6y + 5z = 8,\ 4x + 4y + 6z = 38$

[OR]

b) Find the inverse of $\begin{pmatrix} 2 & 4 & -1 \\ 0 & 3 & 7 \\ 8 & 1 & 5 \end{pmatrix}$ using elementary row operations.

15. a) i) Prove that the sum of the degrees of the points of a graph G is twice the number of lines.

ii) Show that in any group of two or more people, there are always two with exactly the same number of friends inside the group.

[OR]

b) Let G be a (p, q)graph. Prove that the following statements are equivalent.

(i) G is a tree.

(ii) Every two points of G are joined by a unique path.

(iii) G is connected and $p = q + 1$.

(iv) G is acyclic and $p = q + 1$.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. a) Define symmetric difference of two sets.

(b) If $A = \{d, e, f, g\}$, B= $\{a, c, f\}$ then find $A \Delta B$.

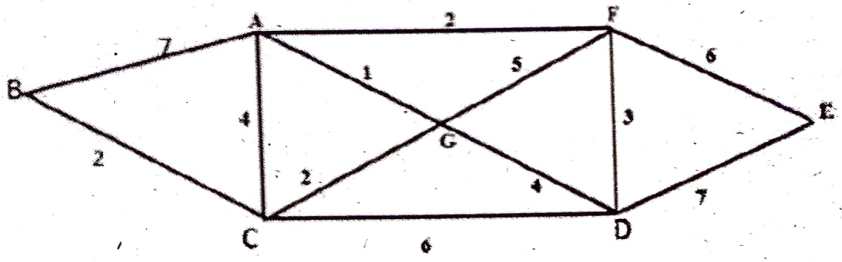
(c) If A and B are sets then prove that $A \Delta B = (A \cup B) - (A \cap B)$.

17. Define tautology and contradiction. Verify whether $\big((p \to q) \wedge (q \to r)\big) \to (p \to r)$ is a tautology.

18. Solve: $S(k) - 3S(k-1) - 4S(k-2) = 4^k$.

19. Find the eigen values and the eigen vectors of the matrix $\begin{pmatrix} 8 & -6 & 2 \\ -6 & 7 & -4 \\ 2 & -4 & 3 \end{pmatrix}$.

20. Find the shortest distances from A to all the other vertices of a graph G.



19. What are the different types of printers? Explain the advantages, disadvantages and uses of each.

20. Discuss the Network Topologies in detail.

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END SEMESTER EXAMINATION – NOVEMBER 2020

Programme : B.B.A **Date : 19.01.2021**
Course Code: 17UITN11 **Time : 10 am. to 1 pm.**
Course Title : Introduction to Information Technology **Max Marks :75**

SECTION – A [10 X 1 = 10]

Answer ALL the Questions.

Choose the Correct Answer.

1. Which of the following is a portable computer?

   [a] Laptop [b] Subnote book

   [c] PDA [d] tablet

2. A group of 8 bits is called a _____.

   [a] byte [b] GB

   [c] MB [d] TB

3. Which of the following loses its contents when the computer is turned off?

   [a] RAM [b] ROM

   [c] PROM [d] All of the above

4. _____ performs arithmetic and logical operations.

   [a] ALU [b] Control unit

   [c] Monitor [d] Printer

Which of the following is a secondary storage device?

[a] Magnetic tape [b] Hard disk

[c] Optional disk [d] SSD

6. The input device used to enter drawings and sketches in to a computer is _____.

[a] Keyboard [b] Floppy disk

[c] Digitizer [d] Speaker

7. What is the amount of data that can be transmitted in a fixed amount of time called?

[a] Refresh rate [b] Resolution

[c] Bandwidth [d] Pixel density

8. Which of the following is an operating system?

[a] DOS [b] Linux

[c] Mac OS [d] MS office

9. LAN Stands for_____.

[a] Local Area Network [b] Large Area Network

[c] Local Access Network [d] Long Area Network

10. Which of the following is a browser?

[a] Windows [b] Word processor

[c] Spreadsheet [d] Internet Explorer

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Explain the characteristics of computers.

[OR]

b) Explain the parts of a computer in detail.

12. a) Explain the working of the CPU.

[OR]

b) Write short notes on ROM.

13. a) What is a magnetic tape? How does it work?

[OR]

b) Explain the different types of optical disks.

14. a) Explain the different classification schemes of computer monitors.

[OR]

b) What are the different types of software? Explain.

15. a) Explain the types of networks in detail.

[OR]

b) Explain web searching in detail.

SECTION – C [3 X 10 = 30]

Answer Any THREE Questions.

16. Discuss the classification of computers in detail.

17. Explain the factors affecting the processor speed.

18. Discuss the different kinds of input devices.

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END SEMESTER EXAMINATION – NOVEMBER 2020

Programme : BCA/CS/IT **Date: 12.01.2021**
Course Code: 17UITA21/17UCAA21/17UCSA21 **Time: 2 pm. to 5 pm.**
Course Title : Operation Research **Max. Marks :75**

SECTION – A [10 X 1 = 10]

Answer ALL the Questions.
Choose the Correct Answer.

1. Operation Research approach is _____.
   [a] intuitive [b] objective
   [c] multi-disciplinary [d] all of the above
2. Decision variables in O.R. models are _____.
   [a] controllable [b] uncontrollable
   [c] parameters [d] constants
3. A constraint in a linear programming problem restricts _____.
   [a] value of objective function [b] value of decision variable
   [c] use of available resource [d] uncertainty of optimum value
4. If two constraints do not intersect in the positive quadrant of the graph, then _____.
   [a] one of the constraint is redundant
   [b] the solution is infeasible
   [c] the solution is unbounded
   [d] the solution is feasible

5. For maximization LPP, the objective function coefficient for an artificial variable is _____.

[a] +M [b] -M

[c] +1 [d] 0

6. If an optimum solution is degenerate, then _____.

[a] the solution is infeasible

[b] there are alternative optimum solutions.

[c] the solution is of no use to the decision maker.

[d] the solution is feasible

7. The dummy source or destination in a T.P. is introduced to _____.

[a] prevent solution to became degenerate.

[b] to satisfy rim conditions.

[c] ensure that total cost does not exceed a limit

[d] solve the balanced transportation problem.

8. The solution to a transportation problem with m-sources and n-destination is feasible, if the number of allocations are _____.

[a] $m+(n-1)$ [b] $m+(n+1)$

[c] $m+n$ [d] m x n

9. In an assignment problem involving four workers and three jobs, total number of assignments possible are _____.

[a] 4 [b] 3

[c] 7 [d] 5

iii) Is the optimum solution unique? If not, find an alternative optimum basic feasible solution.

20. A manufacturing company has four zones A,B,C,D and four sales engineers P,Q,R,S respectively for assignment. Since the zones are not equally rich in sales potential, it is estimated that a particular engineer operating in a particular zone will bring the following sales: Zone A : 4,20,000, Zone B : 3,36,000, Zone C : 2,94,000, Zone D : 4,62,000. The engineers are having different sales ability. Working under same conditions their early sales are proportional to 14,9,11 and 8 respectively. The criteria of maximum expected total sales is to be met by assigning the best engineer to the richest zone, the next best to the second richest zone and so on. Find the optimum assignment and the maximum sales.

SECTION – C [3 X 10 = 30]

Answer Any THREE Questions.

16. Discuss various classification schemes of models.

17. A company makes two kind of leather belts. Belt A is high quality belt B Is of lower quality. The respective profits are Rs.4.00 and Rs.3.00 per belt. Each belt of type A requires twice as much time as a belt of type B, and if All belts were of type B, the company could make 1000 per day. The Supply of leather is sufficient for only 800 belts per day (Both A and B Combined). Belt A requires a fancy buckle and only 400 per day are Available. There are only 700 buckles a day available for belt B. Determine the optimal product mix. Formulate this as a linear Programming problem and solve it by Graphical Method.

18. Use simplex method to solve the LPP: Maximize $z = 4x_1 + 10x_2$ subject to the constraints $2x_1 x_2 \le 50; 2x_1 + 5x_2 \le 100; 2x_1 + 3x_2 \le 90; x_1, x_2 \ge 0$.

19. Consider the following transportation problem:

Factory	Warehouse						Stock available
	1	2	3	4	5	6	
A	7	5	7	7	5	3	60
B	9	11	6	11	--	5	20
C	11	10	6	2	2	8	90
D	9	10	9	6	9	12	50
Demand	60	20	40	20	40	40	

It is not possible to transport any quantity from B to Godwin 5. Determine:

i) Initial solution by Vogel's Approximation method.

ii) Optimum Basic Feasible Solution.

10. The minimum number of lines covering all the zeros in a reduced cost Matrix of order b can be _____.

[a] At most n [b] at least n

[c] n - 1 [d] n + 1

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Describe briefly the different phases of Operation Research.

[OR]

b) What are the advantages of Operation Research model?

12. a) A company has three operational departments (weaving, processing and packing) with capacity to produce three different types of clothes namely suiting's, shirting's and woolens yielding a profit of Rs.2, and Rs.4 and Rs.3 per meter respectively. One meter of suiting requires 3 minutes in weaving, 2minutes in processing and 1 minute in processing and 3 minutes in packing. One meter of woolen requires 3 minutes in each department. In a week, total run time of each department is 60, 40 and 80 hours for weaving, processing and packing respectively. Formulate the linear programming problem to find the product mix to maximize the profit.

[OR]

b) Use graphical method to solve the following LPP: Maximize $z = 2x_1 + 3x_2$ subject to the constraints

$x_1 + 2x_2 \le 30; x_1 - x_2 \ge 0; x_2 \ge 3; 0 \le x_1 \le 20; 0 \le x_2 \le 12$.

13. a) Use Big M method to solve the LPP. Maximize $z = 3x_1 + 2x_2$ constraints

$2x_1 + x_2 \le 1; x_1 + 4x_2 \ge 6; x_1, x_2 \ge 0$

[OR]

b) Use two phase simplex method to solve the LPP: Maximize

$z = 5x_1 + 3x_2$ subject to the constraints $2x_1 + x_2 \le 1; x_1 + 4x_2 \ge 6; x_1, x_2 \ge 0$

14. a) Obtain an initial basic feasible solution to the following transportation problem using the north west corner method.

	D	E	F	G	Available
A	11	13	17	14	250
B	16	18	14	10	300
C	21	24	13	10	400
Requirement	200	225	275	250	

[OR]

b) Find an optimum solution to the following transportation problem:

Factory	Warehouse				Capacity
	D	E	F	G	
A	42	48	38	37	160
B	40	49	52	51	150
C	39	38	40	43	190
Demand	80	90	110	160	

15. a) A departmental head has four subordinates, and four tasks to be Performed. The subordinates differ in efficiency, and the tasks differ Intrinsic difficulty. His estimate, of the time each man would take to Perform each task, is given below:

Tasks	Men			
	E	F	G	H
A	18	26	17	11
B	13	28	14	26
C	38	19	18	15
D	19	26	24	10

[OR]

b) A student has to select one and only one elective in each semester and the semester and the same elective should not be selected in different semesters. Due to various reasons, the expected grades in each subject, if selected in different semesters, vary and they are given below:

Semester	Analysis	Statistics	Graph theory	Algebra
I	F	E	D	C
II	E	E	C	C
III	C	D	C	A
IV	B	A	H	H

The grade points are: H=10, A=9, B=8, C=7, D=6, E=5 and F=4. How will the student select the electives in order to maximize the total expected points and what will be his maximum expected total points?

19. Explain the concepts of webpage design.

20. Elaborate social networking in detail.

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END SEMESTER EXAMINATION – NOVEMBER 2020

Programme :B.B.A. **Date : 19.01.2021**

Course Code: 17UITN21 **Time : 2pm. to 5 pm.**

Course Title : Internet and its Application **Max Marks :75**

SECTION – A **[10 X 1 = 10]**

Answer ALL the Questions.

Choose the Correct Answer.

1. _____ connection connect to your ISP using a telephone line and modem..

   [a] Direct [b] Dial-up

   [c] Wireless [d] Satellite

2. Which of the following are third generation(3G) cellular technologies?

   [a] EDGE [b] HSDPA

   [c] UMTS [d] All the above

3. The URL of the website is entered in _____.

   [a] address bar [b] tool bar

   [c] menu bar [d] title bar

4. _____ is an interactive tool to help people locate information available via the WWW.

   [a] Web index [b] Web directory

   [c] Web search engine [d] Web catalogue

5. _____ is an internet service that translates domain names in to IP addresses.

[a] Domain Name System [b] Translator

[c] Web address [d] ISP

6. Which protocol governs the transfer of Hypertext between two or more computers?

[a] TCP/IP [b] FTP

[c] TELNET [d] HTTP

7. The process of separating the unwanted mails is called as_____.

[a] filtering [b] spaming

[c] phishing [d] all the above

8. The first page of a website is known as _____

[a] front page [b] title page

[c] home page [d] mail page

9. Which one of the following is not a social networking sites?

[a] Mosaic [b] Myspace

[c] Facebook [d] Twitter

10. A _____ is an internet community which is dedicated to the discussion of a particular topic of interest.

[a] mailing list [b] video conferencing

[c] IRC [d] news groups

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Explain about Dial up connection.

[OR]

b) Write a note on cellular broadband

12. a) Explain the working of web.

[OR]

b) Give an account of searching the web.

13. a) Write about domain names.

[OR]

b) Write a brief note on Telnet.

14. a) Explain the safety tips for using E-mail.

[OR]

b) How will you create a website? Explain.

15. a) Write a note on discussion forums.

[OR]

b) Explain briefly about internet relay chat.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. Write about History of Internet.

17. Discuss about different types of browsers.

18. Explain the following protocols. i) TCP/IP ii) FTP

15. a) Explain stack organization in a system.

[OR]

b) Write short note on data manipulation instructions.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. Prove that NAND and NOR are universal gates.
17. Elaborate the functionally of the following,

    i) Adder/Subtractor ii) Controlled inverter iii) Half Adder.
18. Explain the function of seven segment decoder.
19. Describe about Micro Programmed Control with neat diagram.
20. Explain addressing modes with suitable example.

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END SEMESTER EXAMINATION – NOVEMBER 2020

Programme :B.Sc.,(IT) **Date : 05.01.2021**
Course Code: 17UITA31 **Time: 10 am. to 1 pm.**
Course Title : Digital Principles and Computer Organization **Max Marks :75**

SECTION – A **[10 X 1 = 10]**

Answer ALL the Questions.

Choose the Correct Answer.

1. The binary number 10101 is equivalent to decimal number_____.

   [a] 19 [b] 12

   [c] 27 [d] 21

2. The universal gate is _____.

   [a] NAND gate [b] OK gate

   [c] AND gate [d] NOT gate

3. In Boolean algebra, the bar sign(-) indicates _____.

   [a] OR operation [b] AND operation

   [c] NOT operation [d] NOR operation

4. 2's complement of binary number 0101 is _____.

   [a] 1011 [b] 1111

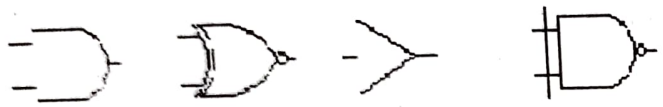
   [c] 1101 [d] 1110

5. A device which converts BCD to seven segments is called_____

[a] encoder [b] decoder

[c] multiplexer [d] demultiplexer

6. Which of the figures shown below represents the exclusive-NOR gate?



a. b. c. d.

7. In instruction format, address of any data location is said to be _____.

[a] function code [b] instruction code

[c] operand [d] logical code.

8. Register which is used to store values of arithmetic and logical operations is termed as _____.

[a] arithmetic register [b] accumulator

[c] logical register [d] controller

9. Splitting cache in to separate instruction and data caches or by using a set of buffers usually called_____.

[a] cache buffer [b] data buffer

[c] instruction buffer [d] trash buffer

10. A stall is commonly called a _____.

[a] pipeline bubble [b] bubble

[c] depth of the pipeline [d] both (a) & (b)

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Write short notes on

a) ASCII Code b) Excess-3 code

[OR]

b) Convert the given binary number in to decimal, octal and hexa.

10001101.0011_2

12. a) Draw the logic circuit and simplify

$f(a,b,c,d)= \bar{A}B\bar{C}\bar{D}+\bar{A}B\bar{C}D+\bar{A}BCD+\bar{A}BC\bar{D}+AB\bar{C}\bar{D}$ using Boolean laws and theorems.

[OR]

b) Solve: i) Binary addition : -123 and +74,

ii) Binary subtraction: -68 and -51.

13. a) Differentiate mux and Dmux.

[OR]

b) Demonstrate the working process of parity generator and parity checker.

14. a) Discuss about computer instructions.

[OR]

b) Describe how the instruction cycle is functioning.

17. Derive the following with an example with and neat sketch.

a) Class specification b) Defining member functions

18. What are the three types of data conversion between uncompatible types? Explain with examples.

19. Explain the following unformatted I/O operations with suitable example.

a) Put() and get() functions b) getline() and write() functions

20. What are the ways a file can be opened? Explain with neat sketch.

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END SEMESTER EXAMINATION – NOVEMBER 2020

Programme : B.Sc. IT **Date : 02.01.2021**

Course Code: 17UITC31 **Time: 10 am. to 1 pm.**

Course Title : Object Oriented Programming Using C++ **Max Marks :75**

SECTION – A **[10 X 1 = 10]**

Answer ALL the Questions.

Choose the Correct Answer.

1. Insulation of data from direct access by the program is called_____.

[a] polymorphism [b] data hiding

[c] inheritance [d] dynamic binding

2. The _____ is a multiple-branching statement where based on a condition, the control is transferred to one of the many possible points.

[a] if....else [b] do-while

[c] for [d] switch

3. The variables declared inside the class are known as data members, and the functions are known as _____.

[a] friend functions [b] member functions

[c] inline functions [d] nesting functions

4. _____ are normally used to initialize variables or objects and to allocate memory.

[a] Destructor [b] Constructor overloading

[c] Consructors [d] Default constructors

5. The _____ operator is unary operators could be overloaded?

[a] - [b] +

[c] += [d] ::

6. When the properties of one class are inherited by more than one class, it is called _____.

[a] inheritance [b] single inheritance

[c] hierarchical inheritance [d] multilevel inheritance

7. _____ simply means one name having multiple forms.

[a] pointers [b] binding

[c] place holder [d] polymorphism

8. A _____ is a sequence of bytes and serves as a source or destination for an I/O data.

[a] stream [b] padding

[c] precision [d] show point

9. The _____ moves get pointer to a specified location.

[a] seekg() [b] seekp()

[c] tellg() [d] tellp()

10. To open an existing file for updating for updating without losing its original contents , we need to open it an _____ mode.

[a] update [b] append

[c] file [d] file pointer

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Explain the conditionally control statements with an example.

[OR]

b) Explain the following with neat diagram i) Inheritance

ii) Polymorphism

12. a) What is a friend functions? What are the special characteristics of using friend functions?

[OR]

b) Describe the importance of destructors.

13. a) Explain how to use overloading binary operators with neat diagram.

[OR]

b) Describe the program of the single inheritance in C++.

14. a) How is polymorphism achieved at compile time and run time?

[OR]

b) What is a stream in C++ ? Explain the stream classes with neat sketch.

15. a) Briefly explain the following syntaxes with example.

i) seekg() ii) seekp() iii) detecting end –of -life

[OR]

b) How the function template to be used in family functions with different arguments? Explain.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. Describe the following with examples

i) Tokens ii) Enumerated data type

b) Describe the breadth first algorithm with suitable example.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. Explain about abstract data type.
17. Briefly about the implementation of queue.
18. Detail about the binary Tree Traversal with example.
19. Explain briefly about the radix sort.
20. Discuss about the representation of graphs.

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END SEMESTER EXAMINATION – NOVEMBER 2020

Programme :B.Sc.(IT) **Date : 04.01.2021**
Course Code: 17UITC32 **Time : 10 am. to 1 pm.**
Course Title : Data Structures **Max Marks :75**

SECTION – A **[10 X 1 = 10]**

Answer ALL the Questions.

Choose the Correct Answer.

1. _____ refers to the domain of values and the operations that can be performed on these values.

   [a] Data structure [b] Data type
   [c] Algorithm [d] Abstract data type

2. In _____ allocation, the elements of the collection are stored in non-contiguous locations.

   [a] dynamic [b] static
   [c] memory [d] linear

3. _____ stack sets up an empty stack.

   [a] Push [b] Pop
   [c] Create [d] Top

4. _____ require incrementing the rear variable and storing the value.

   [a] Deletion [b] Insertion
   [c] Creation [d] Copy

5. In a ____binary tree,nodes cannot have only one child.

[a] complete [b] skew

[c] BST [d] strictly

6. Searching starts from_____ of the tree.

[a] leaf [b] interior

[c] root [d] node

7. The consecutive elements are compared and if they are not in order,they are interchanged in _____ sort.

[a] insertion [b] bubble

[c] merge [d] radix

8. _____ sort is a modification of insertion sort it is applied on subsets of input.

[a] Insertion [b] Bubble

[c] Merge [d] Shell

9. _____ of a vertex in a diagraph is the number of edges that are incident on it.

[a] Outdegree [b] Indegree

[c] Length [d] Path

10. A shortest path between vertices u and v is a path for which _____ is the minimum.

[a] wt(p) [b] p=v0,v1,v,...vk

[c] wt (u,v) [d] M[u][v]

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Define data structure. Write the types of data structures.

[OR]

b) Describe the asymptotic analysis.

12. a) Discuss about the linked list implementation of stack.

[OR]

b) Write the algorithm for circular queue delete operation.

13. a) Describe the types of binary tree.

[OR]

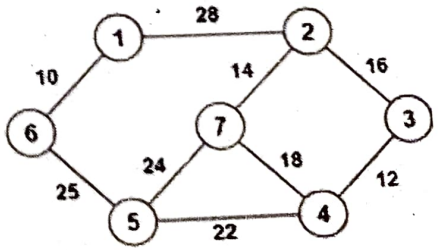
b) Draw an expression tree to represent 3+((5+9)*2)

14. a) Consider the following input:8,4,7,1,3,5, Sort the list using heap sort algorithms.

[OR]

b) Write the algorithm for bubble sort.

15. a) Discuss the Prim's algorithm to determine minimum spanning tree of the following graph.



[OR]

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G.T.N. ARTS COLLEGE (AUTONOMOUS)

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END SEMESTER EXAMINATION – NOVEMBER 2020

Programme : B.Sc., (IT) **Date: 05.01.2021**

Course Code: 17UITA41 **Time: 2 pm. to 5 pm.**

Course Title : Numerical Methods **Max Marks :75**

SECTION – A [10 X 1 = 10]

Answer ALL the Questions.

Choose the Correct Answer.

1. The equation $x^2+5x+6=0$ is called a _____.

   [a] transcendental equations [b] algebraic equation

   [c] quadratic equation in x [d] linear equation

2. One root of $x^3-3x+1=0$ lines between _____ and _____ .

   [a] (1,2) [b] (-1,0)

   [c] 2,3 [d] 4,5

3. The matrix $A=\begin{pmatrix} a_{11} & 00\ldots & 0 \\ a_{21} & a_{22}\ldots & 0 \\ a_{n1} & a_{n2}\cdots & a_{nn} \end{pmatrix}$ is called _____.

   [a] upper triangular matrix [b] lower triangular matrix

   [c] diagonal matrix [d] rectangular matrix

4. If A is diagonal dominant, the system of simultaneous linear equations is said to be _____.

   [a] diagonal dominant system [b] diagonal system

   [c] leading system [d] pivotal system

5. The polynomial $y_p = y_0 + p\Delta y_0 + \frac{p(p-1)}{2!}\Delta^2 y_0 + \ldots$

$+\frac{p(p-1)\ldots\left(p-\left(\overline{n-1}\right)\right)}{n!}\Delta^n y_0$ is known as _____.

[a] Newton's forward interpolation polynomial

[b] Newton's backward interpolation polynomial

[c] Gauss forward interpolation polynomial

[d] Gauss backward interpolation polynomial

6. The iterative method, the first approximation to be _____.

[a] $P_1 = \frac{1}{\Delta y_0}(y_p - y_0)$ [b] $P_1 = \frac{1}{\Delta y_0}(y_0 - y_p)$

[c] $P_1 = \frac{1}{\Delta y_p}(y_p - y_0)$ [d] $P_1 = \frac{1}{\Delta y_p}(y_0 - y_p)$

7. The process of evaluating the definite integral $\int_a^b f(x)dx$ is called _____.

[a] numerical integration [b] definite integral

[c] numerical differentiation [d] non-numerical differentiation

8. $\int_{x_0}^{x_n} f(x)dx = \frac{h}{2}[(y_0 + y_n) - 2(y_1 + y_2 + \ldots + y_{n-1})]$ is known as _____.

[a] Simpson's rule [b] Trapezoidal rule

[c] Gauss rule [d] Lagrange's rule

9. The expansion $y_i = y_0 + \frac{h}{1!}y_0' + \frac{h^2}{2!}y_0'' + \ldots$ is known as _____.

[a] Taylor's series expansion

[b] Euler's series expansion

[c] modified Euler's series expansion

[d] Runge-Kutta series

10. The third order Runge-Kutta formula is given by _____.

[a] $y_3 = y_0 + \left(\frac{1}{6}(K_1 + 4K_2 + K_3)\right)$

[b] $y_0 = y_1 + \left(\frac{1}{6}(K_2 + 4K_1 + K_3)\right)$

[c] $y_1 = y_0 + \left(\frac{1}{6}(K_1 + 4K_2 + K_3)\right)$

[d] $y_1 = y_0 + \left(\frac{1}{3}(K_1 + 3K_2 + K_3)\right)$

SECTION – B **[5 X 7 = 35]**

Answer ALL the Questions.

11. a) Find the real root of the equation $x^3 - 3x + 1 = 0$ lying between 1 and 2 correct to 3 places of decimal by using bisection method.

[OR]

b) Find the smallest positive root of $x^2 - \log_2 x - 12 = 0$ by Regula falsi method.

12. a) Solve the following system of equation by Gauss Jordon method.
$x + y + z = 9;\ 2x - 3y + 4z = 13;\ 3x + 4y + 5z = 40$

[OR]

b) Find first two approximations for the following equations using Jacobi's iteration method.

$3x+4y+15z=54.8;\ x+12y+3z=39.66;\ 10x+y-2z=7.74$

13. a) From the data given below, find the number of students whose weight is between 60 and 70.

Weight	0-40	40-60	60-80	80-100	100-120
No. of Students	250	120	100	70	50

[OR]

b) Apply Gauss forward interpolation formula to find $y(25)$ for the following data.

X	20	24	28	32
Y	2854	3162	3544	3992

14. a) Find $\frac{dy}{dx}$ and $\frac{d^2y}{dx^2}$ at $x=51$ from the following table.

x	50	60	70	80	90
y	19.96	36.65	52.81	77.21	94.61

[OR]

b) Evaluate $\int_0^5 \frac{dx}{4x+5}$ by Trapezoidal rule using 11 coordinates.

15. a) Using Taylor's method, find $y(0.1)$ correct to 3 decimal places from $\frac{dy}{dx}+2xy=1;\ y_0=0.$ with $y_0=2$.

[OR]

b) Using Euler's method solve $\frac{dy}{dx}=1+xy$ with $y(0)=2$. Find $y(0.1)$, $y(0.2)$ and $y(0.3)$.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. Find the negative root of $x^3-2x+5=0$ correct to three places of decimals by the Newton-Rapson method.

17. Solve the following system of equations using Gauss Seidal iteration method. $6x+15y+2z=72;\ x+y+54z=110;\ 27x+6y-z=85.$

18. Using Gauss forward formula find $f(30)$ from the following data.

x	21	25	29	33	37
$f(x)$	18.4708	17.8144	17.1070	16. 3432	15.5154

19. From the following data obtain the first and second derivatives of $y=\log_e x$, at i) $x=500$, ii) at $x=550$.

x	500	510	520	530	540	550
$y=\log_e x$	6.2146	6.2344	6.2538	6.2729	6.2916	6.3099

20. Using Runge-Kutta method of 4th order for the differential equation $\frac{dy}{dx}=xy+y^2,\ y(0)=1$, compute $y(0.1)$ and $y(0.2)$.

18. Explain normalization.

19. Write notes on exception in PL/SQL.

20. Discuss on the issues related to security.

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G.T.N. ARTS COLLEGE (AUTONOMOUS)

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END SEMESTER EXAMINATION – NOVEMBER 2020

Programme :B.Sc. IT **Date : 02.01.2021**
Course Code: 17UITC41 **Time: 2 pm. to 5 pm.**
Course Title : Relational Database Management Concepts **Max. Marks :75**

SECTION – A **[10 X 1 = 10]**

Answer ALL the Questions.

Choose the Correct Answer.

1. A description of data in terms of a data model is called as _____.

   [a] relation [b] schema

   [c] field [d] constraints

2. Which constraints determine whether two subclasses are allowed to contain the same entity?

   [a] Specialized [b] Generalized

   [c] Covering [d] Overlap

3. Expansion of IC is _____.

   [a] Internal Constraints [b] Internal Column

   [c] Integrity Constraints [d] Integrity Column

4. _____ is one of the two formal query languages associated with the relational model.

[a] Relational Algebra [b] Relational Query

[c] Relational Calculus [d] Relational Domain

5. _____ query is query that has another query embedded within it.

[a] Select [b] Single

[c] Nested [d] Union

6. A _____ is a relationship between two attributes.

[a] Functional Dependency [b] Normalization

[c] Trigger [d] Decomposition

7. A _____ is a pointer to the content area.

[a] Cursor [b] Trigger

[c] Packages [d] Errors

8. _____ are stored program, which are automatically executed or fixed when some events occur.

[a] Cursor [b] Trigger

[c] Packages [d] Error

9. _____ means only authorized users should be allowed to modify data.

[a] Secrecy [b] Integrity

[c] Availability [d] Mechanism

10. _____database contains specific information on individuals.

[a] Static [b] Statistical

[c] Algebraic [d] Dynamic

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Write notes on the levels of Abstraction in DBMS.

[OR]

b) Describe Entity, Attributes & Entity set with an example.

12. a) Explain how relationship sets without constrants its mapped to a relation.

[OR]

b) Discuss on domain relational calculus with an example.

13. a) Explain null Values..

[OR]

b) Write short note on BCN7.

14. a) Write a short note on function PL/SQL.

[OR]

b) Discuss the package in PL/SQL.

15. a) List out the three main objectives of secure database applications. Explain them in detail.

[OR]

b) Write notes on encryption.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. Write notes on transaction management.

17. Discuss on Relational Algebra with an example

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END SEMESTER EXAMINATION – NOVEMBER 2020

Programme : B.Sc Information Technology **Date :04.01.2021**
Course Code: 17UITC42 **Time: 2 pm. to 5 pm.**
Course Title : Operating System Concepts **Max. Marks :75**

SECTION – A **[10 X 1 = 10]**

Answer ALL the Questions.

Choose the Correct Answer.

1. The link between two processes P and Q to send and receive messages is called _____.

   [a] communication link [b] message passing link

   [c] synchronization link [d] all of the mentioned

2. To access the services of operating system, the interface is provided by _____.

   [a] system calls [b] API

   [c] library [d] assembly instructions

3. Using semaphores, each process has a critical section used to access this _____.

   [a] computers [b] processors

   [c] resources [d] users

4. In a uniprocessor system concurrent processes cannot have overlapped _____.

[a] access [b] termination

[c] completion [d] execution

5. A problem encountered in multitasking when a process is perpetually denied necessary resources is called _____.

[a] deadlock [b] starvation

[c] inversion [d] aging

6. Round Rubbin scheduling falls under the category of _____.

[a] nonpreemptive [b] preemptive

[c] nonpromptive [d] promptive

7. In fixed size partition, the degree of multiprogramming is bounded by_____.

[a] memory Size [b] CPU Utilization

[c] number of partition [d] file size

8. Effective access time is directly proportional to _____.

[a] memory access time [b] hit ratio

[c] page fault rate [d] turnaround time

9. Each _____ has its own index block.

[a] partition [b] address

[c] file [d] process

10. Mapping of file is managed by_____.

[a] page table [b] file system

[c] virtual memory [d] file metadata

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Describe about operating system components and goals.

[OR]

b) Write about process states with neat diagram.

12. a) Explain about hardware solution to the mutual exclusion problems.

[OR]

b) Explain about Dekker's algorithm for mutual exclusion.

13. a) List out the four necessary conditions for handling deadlock.

[OR]

b) Describe about preemptive vs non preemptive scheduling.

14. a) Explain about fixed partition multiprogramming.

[OR]

b) Write about page fault frequency (PFF) page replacement.

15. a) Explain about rotational optimization.

[OR]

b) Describe about file system in detail.

SECTION – C [3 X 10 = 30]

Answer Any THREE Questions.

16. Explain about process management.
17. Briefly explain about semaphores.
18. Explain about deadlock avoidance with Dijkstra's bankers algorithm.
19. Illustrate any three page replacement strategies with examples.
20. Breifly explain about file allocation method with suitable example.

SECTION – C [3 X 10 = 30]

Answer Any THREE Questions.

16. Write an essay on Ozone layer depletion.
ஓசோன் படலம் அழிவிற்கான காரணம் குறித்து கட்டுரை எழுதுக.

17. Give an account of ecological pyramids.
சூழலியல் பிரமிடுகள் குறித்து கட்டுரை வரைக.

18. Explain various non conventional energy sources.
மரபு சாரா ஆற்றல் பற்றி விவாதி.

19. Write an essay on air pollution and its control.
காற்று மாசுபாடு மற்றும் அதைக்கட்டுபடுத்தும் முறைகள் பற்றி எழுதுக.

20. Discuss the need and approaches for conservation of biodiversity.
பல்லுயிர்பெருக்கத்தின் முக்கியத்துவம் அதனைப் பாதுகாக்கும் முறைகள் பற்றி விவாதி.

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END SEMESTER EXAMINATION – NOVEMBER 2020

Programme :B.A/B.Sc./B.Com/B.B.A./B.C.A. **Date: 29.12.2020**
Course Code: 17UESV51 **Time: 10 am – 1 pm**
Course Title : Environmental Studies **Max. Marks: 75**

SECTION – A [10 X 1 = 10]

Answer ALL the Questions.
Choose the Correct Answer.

1. The most traditional word to refer our environment is ----------
[a] Mother Nature [b] Queen nature
[c] King of forest [d] Prince Nature
சுற்றுச்சூழல் என்னும் வார்த்தையைக் குறிக்கும் பாரம்பரியமான சொல் -----
[அ] இயற்கை அன்னை [ஆ] இயற்கை அரசி
[இ] காடுகளின் அரசன் [ஈ] இயற்கை இளவரசன்

2. The lowest layer of the atmosphere is ----------.
[a] Ionosphere [b] Thermosphere
[c] Troposphere [d] Mesosphere
வளிமண்டலத்தின் கீழ் அடுக்கு ---------.
[அ] அயனி மண்டலம் [ஆ] வெப்ப மண்டலம்
[இ] ட்ரோபோஸ்பியர் [ஈ] மீயோஸ்பியர்

3. Who developed ecological pyramid?
[a] Odum [b] Haekal
[c] Charles Elton [d] A.C.Tensley
சுற்றுச்சூழல் பிரமிடை உருவாக்கியவர் யார்?
[அ] ஓடம் [ஆ] பிரபு
[இ] அடிமை [ஈ] வியாபாரி

4. Energy ---------- in an ecosystem.
[a] is relased [b] is absorbed
[c] Flows [d] is balanced

அற்றுச்சூழலில் ஆற்றல் என்பது
[அ] விடுவிக்கப்படுகிறது [ஆ] உறிஞ்சப்படுகிறது
[இ] ஒடுகிறது [ஈ] சமநிலைப்படுகிறது

Which one is not an non conventional energy?
[a] Bio energy [b] Solar energy
[c] Tidal energy [d] Petroleum

பின்வருவனவற்றுள் எது மரபுசாரா ஆற்றல்?
[அ] உயிரி ஆற்றல் [ஆ] சூரிய ஆற்றல்
[இ] அலை ஆற்றல் [ஈ] பெட்ரோலியம்

6. Power production from urban waste was first started in the following city.
[a] Delhi [b] Kolkata
[c] Mumbai [d] Chennai

பின்வரும் எந்த நகரத்திலிருந்து முதன்முதலில் நகர குப்பைகளில் இருந்து மின் உற்பத்தி செய்யப்பட்டது.
[அ] டெல்லி [ஆ] கொல்கத்தா
[இ] மும்பை [ஈ] சென்னை

7. --------- is known as "Jewels of the Earth".
[a] Mangrove forest [b] Deciduous forest
[c] Temprate rain forest [d] Grassland

பூமியின் ஆபரணம் ————.
[அ] சதுப்புநில காடுகள் [ஆ] இலையுதிர்காடுகள்
[இ] வெப்பமண்டல மழைக்காடுகள் [ஈ] புல்வெளிக்காடுகள்

8. The best example of pesticite pollution is ----------.
[a] DDT [b] Endpin
[c] Endosulfan [d] Benzidineg

மாசு ஏற்படுத்தும் பூச்சிக்கொல்லிக்கு சிறந்த உதாரணம்.
[அ] DDT [ஆ] என்டைபான்
[இ] என்டோசல்பான் [ஈ] பென்சிடைன்

9. ------ number of mega diversity countries is present in the world.
[a] 9 [b] 6
[c] 12 [d] 15

உலகத்தில் உள்ள அதிக பல்லுயிர்பெருக்க நாடுகள் எத்தனை?
[அ] 9 [ஆ] 6
[இ] 12 [ஈ] 15

10. The first biosphere reserve declared in India in 1986 is ----------
[a] Gir forest [b] Nilgiris
[c] Palani hills [d] Agasthiyamalai

1986-ல் முதன்முதலில் இந்தியாவில் அறிவிக்கப்பட்ட உயிர் கோளம் எது?
[அ] கிர் காடுகள் [ஆ] நீலகிரி
[இ] பழனி [ஈ] அகஸ்தியர் மலை

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Briefly explain about Global warming.
அ) உலக வெப்பமயமாதல் பற்றி சுருக்கமாக விவரி

[OR]

b) Give an account of cloud bursting.
ஆ) மேகவெடிப்பு பற்றி விவரி.

12. a) Explain the structural features of an ecosystem.
அ) சூழ்நிலை மண்டலத்தின் அமைப்பை விவரி.

[OR]

b) What is food chain? Give its importance.
ஆ) உணவுச்சங்கிலி என்றால் என்ன? அதன் முக்கியத்துவத்தை எழுதுக.

13. a) Give an account of different types of coal and its important properties.
அ) நிலக்கரி வகைகள் மற்றும் அதன் பண்புகளை விவரி.

[OR]

b) Discuss the hydel power potential in India.
ஆ) இந்தியாவின் நீர்மின் உற்பத்தி திறன் பற்றி விவரி.

14. a) Give a brief note on non-renewable and renewable resources.
அ) புதுப்பிக்கக்கூடிய மற்றும் புதுப்பிக்க இயலா ஆற்றல் பற்றி சிறு குறிப்பு வரைக.

[OR]

b) Explain the mineral resources in India.
ஆ) இந்தியாவின் தாது வளங்களை விவரி.

15. a) What is IUCN red list and explain different terms used in red list.
அ) IUCN சிகப்பு பட்டியல் பற்றி எழுதுக. மேலும் சிகப்பு பட்டியலில் உள்ள கூற்றுக்களை விவரி.

[OR]

b) Discuss the causes of extinction of species.
ஆ) உயிரின அழிவிற்கான காரணங்களை விவாதி

18. What is the difference between Pure Aloha and Slotted Aloha? Explain.

19. Explain routing principles and its importance.

20. Discuss E-mail and its protocol.

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END SEMESTER EXAMINATION – NOVEMBER 2020

Programme : B.Sc., IT **Date :21.12.2020**

Course Code: 17UITC51 **Time: 10 am. to 1 pm.**

Course Title : Data Communication & Computer Networks **Max Marks :75**

SECTION – A **[10 X 1 = 10]**

Answer ALL the Questions.

Choose the Correct Answer.

1. The _____ topology has a direct connection between every pair of devices in the network.

   [a] mesh [b] ring

   [c] star [d] bus

2. OSI Model contains _____ layer protocol for network communication.

   [a] six [b] seven

   [c] four [d] five

3. _____ Modem is a protocol similar to X-Modem

   [a] R [b] S

   [c] Y [d] Z

4. A LAN that transmits data at 100 Mbps can deliver a given message faster than a LAN that sends the data at_____

[a] 10Mbps [b] 100 Mbps.

[c] 50 Mbps. [d] 1000 Mbps

5. Slotted Aloha has _____ the capacity of an Aloha system.

[a] double [b] single

[c] triple [d] equal

6. Circuit switching was designed for _____ communication.

[a] voice [b] video

[c] cable [d] All the above

7. ICMP forms an integral part of all _____ implementation.

[a] IP [b] IT

[c] IMP [d] INP

8. _____ uses IP to carry message.

[a] ICP [b] TCP

[c] IMP [d] TMP

9. Most corporations choose to register under the _____domain.

[a] .IN [b] .COM

[c] .EDU [d] .UK

10. The _____ specifies how messages are sent on the internet.

[a] SMTP [b] STMP

[c] POP [d] IME

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Write short notes on Network Categories.

[OR]

b) Explain about TCP/IP Architecture.

12. a) How does a single bit error differ from a Burst error? Explain.

[OR]

b) Explain Asynchronous protocols.

13. a) Explain Fiber Distributed Data interfaces.

[OR]

b) Write short notes on Ethernet Technologies.

14. a) Describe the principles of Internetworking.

[OR]

b) Describe user datagram protocol.

15. a) Enumerate file transfer protocol.

[OR]

b) Describe Hypertext and Hyper media.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. What are the Types of Topology. Explain.

17. Discuss the two Techniques of flow control.

15. a) Describe the walkthroughs and inspections.

[OR]

b) Write a short note on Debugging.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. Analyse the quality and productivity factors.
17. Enumerate the software cost factors.
18. Analyse the software requirements specifications.
19. Explain the design techniques.
20. Analyse the formal verifications.

Reg. No:

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END SEMESTER EXAMINATION – NOVEMBER 2020

Programme : B.Sc. IT **Date : 22.12.2020**
Course Code: 17UITC52 **Time : 10 am. to 1 pm.**
Course Title : Software Engineering **Max Marks :75**

SECTION – A **[10 X 1 = 10]**

Answer ALL the Questions.

Choose the Correct Answer.

1. Software project manager is engaged with software management activities. He is responsible for _____.
   [a] project planning.
   [b] monitoring the progress
   [c] communication among stakeholders
   [d] All the above
2. What is the main aim of software engineering?
   [a] Reliable software [b] Cost effective software
   [c] Reliable and cost effective Software [d] None of the above
3. Which phase is refers to the support phase of software development?
   [a] Acceptance phase [b] Testing
   [c] Maintenance [d] None of the above

4. *Cost of Production* = Right the first time cost(RTF+-------)

[a] cost of deployment [b] cost of Quality

[c] cost of maintenance [d] cost of Production

5. Which document is created by system analyst after the requirements are collected from various stakeholders?

[a] Software Requirement Specification

[b] Software Requirement Validation

[c] Feasibility Study

[d] Requirement Gathering

6. What is the correctness, completeness and consistency of the requirements model will have a strong influence on the quality of all work products that follow?

[a] Requirement quality [b] Design Quality

[c] Code Quality [d] Quality control effectiveness

7. Design phase is followed by_____.

[a] coding [b] testing

[c] maintenance [d] debugging

8. Which software designers tool helps to design the block structure of the software, that may further be broken down in to smaller modules using refinement techniques?

[a] Analysis tools [b] Design tools

[c] Configuration management tools [d] Documentation tools

9. From the following which quality deals with maintaining the quality of the software product?

[a] Quality assurance [b] Quality control

[c] Quality Efficiency [d] Quality maintanence

10. Debugging is _____.

[a] creating program code

[b] finding and correcting errors in the program code

[c] identifying the task to be computerized

[d] creating the algorithm

SECTION – B **[5 X 7 = 35]**

Answer ALL the Questions.

11. a) List out in detail the project size categories.

[OR]

b) Describe the other planning activities in software project.

12. a) Write a short note on Algorithmic cost models.

[OR]

b) Explain the Estimating software maintenance costs.

13. a) Write a short notes on a) Relational Notations b) Recurrence relations.

[OR]

b) Explain the PSL/PSA.

14. a) Write a short notes on Modules and modularization criteria.

[OR]

b) Explain the detailed design considerations.

SECTION – C [3 X 10 = 30]

Answer Any THREE Questions.

16. Explain Constructors and its types in detail.
17. Discuss the different levels of access protection available in java.
18. Write a program to draw any three geometric objects.
19. Explain various HTML APPLET tags.
20. Explain various methods defined by Http Servlet Request Interface.

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END SEMESTER EXAMINATION – NOVEMBER 2020

Programme :B.Sc., IT **Date : 23.12.2020**
Course Code: 17UITC53 **Time : 10 am to 1 pm.**
Course Title : Java Programming **Max.Marks :75**

SECTION – A [10 X 1 = 10]

Answer ALL the Questions.

Choose the Correct Answer.

1. Private variables in a class can be accessed through_____.
   [a] object of the class [b] another variable
   [c] methods declared as public [d] methods declared as private
2. All exception types are subclasses of the built-in class_____.
   [a] throwable [b] finally
   [c] catch [d] try
3. A class that is inherited is called _____.
   [a] sub class [b] super class
   [c] main class [d] inherited class
4. The keyword string in java is a _____.
   [a] class [b] interface
   [c] package [d] object

5. AWT referred as_____.

[a] Array Window Toolset [b] Abstract Warning Tools

[c] Abstract Window Toolkit [d] Applet Window Toolkit

6. Lines are drawn by _____.

[a] putLine( ) [b] drawLine( )

[c] paintLine() [d] fillLine( )

7. Which one of the following is not a method in Thread class?

[a] join [b] run

[c] sleep [d] alive

8. Which one of the following is not used to create file objects?

[a] File(String directory path)

[b] File(String directorpath, String filename)

[c] File(File dirObj, String filename)

[d] File(String filename, File dirObj)

9. _____ class is used to encapsulate both IP address & domain name.

[a] Inet Address [b] Content Handler

[c] Multicast Socket [d] URL Class Loader

10. _____ are small program that execute on the server side of a web connection.

[a] Applet [b] Servlet

[c] AWT [d] Swings

SECTION – B **[5 X 7 = 35]**

Answer ALL the Questions.

11. a) Explain the features of JAVA programming.

[OR]

b) Define throw and finally statements with its syntax and example.

12. a) Write a JAVA program to sorting set of alphabets.

[OR]

b) Explain with an example of JAVA program to define Protected access specifier.

13. a) List out various main event classes in JAVA.AWT. event and define adjustment event class.

[OR]

b) Explain in detail flow layout with an example.

14. a) Explain the various steps in applet initialization and termination.

[OR]

b) Write an example program in passing parameters to applets.

15. a) Explain datagram packet constructors in detail.

[OR]

b) Explain in detail reading servlet parameters with an example.

15. a) *List and briefly define classes of intrusion.*

[OR]

b) Mention the techniques used by firewalls to control access and enforce a security policy.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. Explain the details of model for network security.
17. Describe public key cryptography.
18. Explain the details of hash function algorithm.
19. Describe about IP security architecture.
20. Illustrate different type of digital immune system.

Reg. No:

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END SEMESTER EXAMINATION - NOVEMBER 2020

Programme : B.Sc. IT **Date : 24.12.2020**
Course Code: 17UITE52 **Time: 10 am to 1 pm.**
Course Title : Cryptography and Network Security **Max .Marks :75**

SECTION – A **[10 X 1 = 10]**

Answer ALL the Questions.

Choose the Correct Answer.

1. _____ attempts to learn or make use of information from the system but does not affect system resources.

   [a] Passive attack [b] Active attack
   [c] Traffic analysis [d] Security attack

2. _____ is the scrambled message produced as output and it depends on the plaintext and the secret key.

   [a] Plaintext [b] Secret key
   [c] Cipher text [d] Public key

3. _____ refers to the ability to change keys quickly and with a minimum of resources.

   [a] General key [b] Valid key
   [c] Private key [d] Key agility

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Reg. No:

SECTION – C [3 X 10 = 30]

Answer Any THREE Questions.

16. Summarize the concept of application manifeast file in android.

17. Briefly discuss about the intents & broadcast receivers.

4. Each block of 64 plaintext bits is encoded independently using the same key as known as ________.

[a] Cipher Block Chaining (CBC) [b] Electronic Code book(ECB)

[c] Cipher Feedback (CFB) [d] Output Feedback (OFB)

5. A function that maps a message of any length into a fixed-length hash value, which serves as the authenticator as known as ________.

[a] virtual function [b] index function

[c] hash function [d] decryptions

6. A message M transmitted from source A to destination B is encrypted using a secret key K shared by A and B. If no other party knows the key________.

[a] symmetric Encryption [b] message encryption

[c] public key encryption [d] asymmetric encryption

7. ________ protocol obtained from the IPv4 protocol or IPv6 next header field.

[a] File transport [b] Transport Layer

[c] IP Address [d] UserId

8. ________ a valid certificate was received, but when access control was applied ,the sender decided not to proceed with the negotiation.

[a] Unknown [b] Over flow

[c] Access denied [d] Decode failed

9. ________ are decoy systems that are designed to lure a potential attacker away from critical systems.

[a] Honeypots [b] Intrusion

[c] Hostagent [d] Detection

10. ________ programs can be used to accomplish functions indirectly that an unauthorized user could not a accomplish directly.

[a] Worm [b] Virus

[c] Trojan horse [d] Logic Bomb

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) What is the difference between passive and active security threats?

[OR]

b) Briefly define symmetric cipher model.

12. a) Evaluate the criteria of AES.

[OR]

b) Explain the block modes of operations.

13. a) Explain the Diffie-Hellman key exchange.

[OR]

b) Define digital signature. What are the properties a digital signature?

14. a) What are three threats associated with user authentication over a network or internet?

[OR]

b) What are the five principle services provided by PGP?

15. a) List and briefly define classes of intrusion.

[OR]

b) Mention the techniques used by firewalls to control access and enforce a security policy.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. Explain the details of model for network security.

17. Describe public key cryptography.

18. Explain the details of hash function algorithm.

19. Describe about IP security architecture.

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END SEMESTER EXAMINATION - NOVEMBER 2020

Programme : B.Sc. IT **Date : 24.12.2020**

Course Code: 17UITE52 **Time: 10 am to 1 pm.**

Course Title : Cryptography and Network Security **Max .Marks :75**

SECTION – A **[10 X 1 = 10]**

Answer ALL the Questions.

Choose the Correct Answer.

1. _____ attempts to learn or make use of information from the system but does not affect system resources.

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2. _____ is the scrambled message produced as output and it depends on the plaintext and the secret key.

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[c] AWT [d] Swings

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Explain the features of JAVA programming.

[OR]

b) Define throw and finally statements with its syntax and example.

12. a) Write a JAVA program to sorting set of alphabets.

[OR]

b) Explain with an example of JAVA program to define Protected access specifier.

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b) Explain in detail flow layout with an example.

14. a) Explain the various steps in applet initialization and termination.

[OR]

b) Write an example program in passing parameters to applets.

15. a) Explain datagram packet constructors in detail.

[OR]

b) Explain in detail reading servlet parameters with an example.

15. a) List and briefly define classes of intrusion.

[OR]

b) Mention the techniques used by firewalls to control access and enforce a security policy.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. Explain the details of model for network security.
17. Describe public key cryptography.
18. Explain the details of hash function algorithm.
19. Describe about IP security architecture.
20. Illustrate different type of digital immune system.

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END SEMESTER EXAMINATION - NOVEMBER 2020

Programme : B.Sc. IT **Date : 24.12.2020**
Course Code: 17UITE52 **Time: 10 am to 1 pm.**
Course Title : Cryptography and Network Security **Max .Marks :75**

SECTION – A **[10 X 1 = 10]**

Answer ALL the Questions.

Choose the Correct Answer.

1. _____ attempts to learn or make use of information from the system but does not affect system resources.

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   [c] Traffic analysis [d] Security attack

2. _____ is the scrambled message produced as output and it depends on the plaintext and the secret key.

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   [c] Cipher text [d] Public key

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   [a] General key [b] Valid key
   [c] Private key [d] Key agility

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[a] Cipher Block Chaining (CBC) [b] Electronic Code book(ECB)

[c] Cipher Feedback (CFB) [d] Output Feedback (OFB)

5. A function that maps a message of any length into a fixed-length hash value, which serves as the authenticator as known as _____.

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[a] Honeypots [b] Intrusion

[c] Hostagent [d] Detection

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[c] Trojan horse [d] Logic Bomb

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) What is the difference between passive and active security threats?

[OR]

b) Briefly define symmetric cipher model.

12. a) Evaluate the criteria of AES.

[OR]

b) Explain the block modes of operations.

13. a) Explain the Diffie-Hellman key exchange.

[OR]

b) Define digital signature. What are the properties a digital signature?

14. a) What are three threats associated with user authentication over a network or internet?

[OR]

b) What are the five principle services provided by PGP?

(ii) Summarize the concept of application manifest file in android.

(iii) Briefly discuss about the intents & broadcast receivers.

(iv) Discuss about the interactive control in enhancing your views.

(v) Explain about the home screen widgets.

(vi) Explain about signing and publishing applications.

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END SEMESTER EXAMINATION – NOVEMBER 2020

Programme : B.Sc. IT
Course Code: 17UITC61
Course Title : Android Programming

Date : 21.12.2020
Time: 2 pm. to 5 pm.
Max. Marks :75

SECTION – A

[10 X 1 = 10]

Answer ALL the Questions.

Choose the Correct Answer.

1. _____ support enables you to create a range of map-based applications that leverage the mobility of android devices..

   [a] Google map [b] Embedded map

   [c] Android map [d] all the above

2. _____ includes port forwarding, stack heap and thread viewing, process details and screen capture facilities.

   [a] DDMS [b] DDMM

   [c] DDSS [d] DMDS

3. _____ allows you to create simple UI that align a sequence of child views in either a vertical (or) a horizontal line.

   [a] Linear layout [b] Grid layout

   [c] Relative layout [d] Relation layout

4. _____ enable you to divide your activities into fully encapsulated reusable components, each with its own life cycle.

[a] fragments [b] layout

[c] intents [d] none

5. _____ on menu items are visible in the overflow and expanded menus as well as within submenu.

[a] Radio button [b] List box

[c] Check box [d] Dialog box

6. _____ are akin to traditional cell based cartoons in which an image is chosen for each frame.

[a] Layout [b] Frame by frame

[c] Property [d] Canvas

7. _____ enable your application to populate a piece of interactive screen real estate and embed an entry point, directly on the user's home screen.

[a] App [b] Widget

[c] XML file [d] Pop up

8. _____ use a surface view to render a dynamic display that can be interacted within real time.

[a] XML file [b] Line wall paper

[c] Home screen [d] Location

9. _____ is an important consideration when your application uses the user's location-particularly when it is regularly updating their current position.

[a] Privacy [b] Known location

[c] Geocoding [d] unknown location

10. _____ enables you to translate between street addresses and longtitude /latitude map coordinates.

[a] Map [b] Geocoding

[c] Location based [d] None

SECTION – B [5 X 7 =

Answer ALL the Questions.

11. a) Write about the native android application.

[OR]

b) Explain about android virtual device manager.

12. a) Explain about the android widget tool box.

[OR]

b) Explain about native android actions in intents.

13. a) Summarize the concepts of creating different ways of notification for users in android.

[OR]

b) Discuss about the animations and its types.

14. a) Write a short note on camera setting & image parameter.

[OR]

b) Discuss about the audio effects.

15. a) Write about the (i) Location Privacy, ii)Finding the last known location.

[OR]

b) Explain about the distributing applications.

14. a) Explain the three steps in the methodology for performance testing.

[OR]

b) Define regression testing. Explain the types of regression testing with neat diagram.

15. a) What are the various test processes in test plan? Explain.

[OR]

b) Explain the various development defect metrics with neat diagram.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. Derive the static testing methods and static analysis tools.
17. Write down the methodologies available to decide the order for integration testing.
18. Describe in detail about any four non-functional testing with diagram.
19. What are the different methodologies for regression testing? Explain with figure.
20. Describe that different organization use different methods of test defect metrics use with suitable diagrams.

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END SEMESTER EXAMINATION – NOVEMBER 2020

Programme :B.Sc. IT **Date : 22.12.2020**
Course Code: 17UITC62 **Time: 2 pm. to 5 pm.**
Course Title : Software Testing **Max. Marks :75**

SECTION – A ***[10 X 1 = 10]***

Answer ALL the Questions.

Choose the Correct Answer.

1 . _____ is the process of evaluating a system or component during or at the end of the development process to determine whether it satisfies specified requirements.

[a] testing [b] verification
[c] validation [d] quality

2. _____ testing takes into account the code, code structure, internal design and how they are coded

[a] static [b] black box
[c] white box [d] structural

3. Testing done to ensure that the product features work consistently with different infrastructure components is called _____ testing.

[a] positive [b] negative
[c] graph based [d] compatibility

4. _____ integration means that all the components of the system are integrated and tested as a single unit

[a] top-down [b] bottom-up

[c] system [d] bi-directional

5. To evaluate the ability of the system or an independent component of the system to perform its required functions repeatedly for a specified period of time is called _____ testing

[a] stress [b] scalability

[c] reliability [d] perform

6. _____ testing is done to show that the product does not fail when unexpected input is given.

[a] Positive [b] State based

[c] Compatibility [d] Negative

7. _____ requirements are those that are common across all products in the product domain area.

[a] specific [b] performance

[c] collecting [d] generic

8. A _____ testing is done between test cycles to ensure that the defect fixes that are done and the functionality that were working with the earlier test cycles continue to work

[a] re-testing [b] regression

[c] regular regression [d] final regression

9. In order to have a better handle on the size estimate, the work to be done is broken down into smaller and more manageable parts called _____ units

[a] activity break down structure [b] lines of code

[c] work break down structure [d] robustness

10. _____ metrics combine several measurements and parameters with effort spent on the product.

[a] project [b] progress

[c] productivity [d] test defect

SECTION – B **[5 X 7 = 35]**

Answer ALL the Questions.

11. a) Define the following :

i) testing ii) verification iii) validation

[OR]

b) List and explain the the various types of code coverage testing.

12. a) What is meant by black box testing? Explain why the overall functionality verification of the black box testing is done.

[OR]

b) Evaluate any two methods to evolve scenarios testing with figure.

13. a) Briefly explain any three techniques to be performed for functional system testing.

[OR]

b) Discuss the functional testing and non-functional testing.

15. a) Explain the role of educational institution in value education.
அ) மதிப்புகளை பரப்புவதில் கல்வி நிலையங்களின் பங்கு பற்றி விளக்குக.

[OR]

b) Explain peer group in value formation.
ஆ) "ஒப்பார் குழு" என்பதை விளக்குக.

SECTION – C [3 X 10 = 30]

Answer Any THREE Questions.

16. Write about the significance of values and individual.
விழுமியங்களின் சிறப்பம்சங்கள் மற்றும் தனி மனித விழுமியங்களையும் குறித்து வரைக.

17. Write an assay on religions and peace.
சமயங்களும் அமைதியும் என்பது குறித்து கட்டுரைக்க.

18. Write an essay about human rights and importance of human rights.
மனித உரிமைகள் அவற்றின் முக்கியத்தும் ஆகியவை பற்றி கட்டுரைக்க.

19. Write about Team Spirit and development.
ஓர்மை உணர்வும் குழு ஆற்றலின் வளர்ச்சியும் குறித்து வரைக.

20. Who is your role model? Why did you choose to be so?
உன்னுடைய வாழ்க்கைக்கான முன்மாதிரி யார்? நீவிர் ஏன் அவர்களை தேர்ந்தெடுத்தீர்கள்?

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END SEMESTER EXAMINATION – NOVEMBER 2020

Programme : B.A/B.Sc./B.Com/B.B.A./B.C.A **Date: 29.12.2020**
Course Code: 17UVEV61 **Time: 2 pm – 5 pm**
Course Title : Value Education **Max Marks :75**

SECTION – A *[10 X 1 = 10]*

Answer ALL the Questions.
Choose the Correct Answer.

1. Value on the taking care of one's body of a person is ----------.
[a] physical value [b] special value
[c] social value [d] ethical value
மதிப்பு என்பது ஒருவனின் ---------- உடலைப் பேணுவது ஆகும்.
[அ] உடல்சார்ந்த [ஆ] மனம் சார்ந்த
[இ] சமுதாயம் சார்ந்த [ஈ] ஒழுக்க நெறி
2. _____ is a belief of our power and abilities.
[a] Self confidence [b] Self evaluation
[c] Tolerance [d] Hard work
------ என்பது தனது சக்தியையும் திறமையையும் நம்புவது.
[அ] தன்னம்பிக்கை [ஆ] சுயமதிப்பீடு
[இ] பொருத்தல் [ஈ] விடாமுயற்சி
3. Which religion celebrate Ahimsa as their main quality?
[a] Buddhism [b] Jainism
[c] Sikhism [d] Christianity
அஹிம்சை என்ற அறம், பண்மை கொண்டாடும் மதம் எது?
[அ] புத்தமதம் [ஆ] சமண மதம்
[இ] சீக்கிய மதம் [ஈ] கிறிஸ்துவமதம்
4. --------- is the efficiency characters of motivation, hardwork, carefulness, seriousness.
[a] Patience [b] Angry
[c] Courage [d] Experience

[இ] வளமை [ஈ] அனுபவம்

5. Consequence of social integration _____.
[a] economic growth [b] right to education
[c] social development [d] all of these
சமூக ஒற்றுமையின் விளைவுகள் ———
[அ] பொருளாதார வளர்ச்சி [ஆ] கல்வியறிவு பெறுதல்
[இ] சமுதாய முன்னேற்றம் [ஈ] இவையனைத்தும்

6. Which of the following is not required for competence development?
[a] Commitment [b] Experience
[c] Observation [d] Ego
கீழ்கண்டவற்றில் எது ஆற்றல் வளர்ச்சிக்கு தேவையில்லை?
[அ] பொறுப்பு [ஆ] அனுபவம்
[இ] உற்று நோக்கல் [ஈ] அகங்காரம்

7. Freedom, Equality, Fraternity, Tolerance are principles of _____.
[a] democratic functioning [b] accountability
[c] learning process [d] none of these
சுதந்திரம், சமத்துவம், சகோதரத்துவம், சகிப்புத்தன்மை ஆகிய கோட்பாடுகள் கொண்டது ———
[அ] ஜனநாயகத்தின் செயல்பாடுகள் [ஆ] பொறுப்பின் செயல்பாடு
[இ] கல்வியின் செயல்பாடுகள் [ஈ] இவற்றில் எதுவுமில்லை

8. The common values of all the professions are _____.
[a] Acquiring knowledge [b] Commitment
[c] Sincerity [d] All the above
தொழில் சார்ந்த பொது மதிப்பு என்பது ———.
[அ] அறிவு பெறுவது [ஆ] அர்ப்பணிப்பு
[இ] நேர்மை [ஈ] இவை அனைத்தும்

9. The statement "Value educational for peace, culture and human development form India to the world" was given by _____.
[a] Mahatma Gandhi [b] Swami Vivekananda
[c] Dr. B.R. Ambedkar [d] Jawaharlal Nehru
மதிப்புறு கல்வியின் மூலம் அமைதி கலாசாரம்,மனித வளர்ச்சி போன்றவை இந்தியாவில் இருந்து உலகிற்று எடுத்து இயம்பியவை" என்ற கூற்று கூறியவர் யார்?
[அ] மகாத்மா காந்தி [ஆ] சுவாமி விவேகானந்தர்
[இ] Dr.B.R.அம்பேத்கார் [ஈ] ஜவஹர்லால் நேரு

[a] value from human behaviour [b] value in art and literature
[c] rules of society [d] ideals of religious
அழகியல் மதிப்பு என்பது எதனுடைய தொடர்பு?
[அ] மனித நடத்தையின் மதிப்பு [ஆ] கலை மற்றும் இலக்கியத்தின் மதிப்பு
[இ] சமுகத்தின் மதிப்பு [ஈ] மதகொள்கைகள்

SECTION – B [5 X 7 = 35]
Answer ALL the Questions.

11. a) How do you consider self discipline, compassion, forgiveness and honesty as values?
அ) சுய ஒழுக்கம், இரக்கம், மன்னிப்பு, நேர்மை ஆகியவற்றின் விழுமிய பண்புகளை கூறுக.

[OR]

b) What is courage? Write the importance of courage.
ஆ) தைரியம் என்றால் என்ன? அதன் முக்கியத்துவத்தை எழுதுக.

12. a) What is karma? Give an example.
அ) கர்மா என்றால் என்ன? அதற்கு எடுத்துக்காட்டு தருக.

[OR]

b) What is the need for religious harmony?
ஆ) மத நல்லிணக்கத்தின் அவசியத்தை கூறுக.

13. a) Define Democracy. State the importance and types of democracy.
அ) மக்களாட்சி என்பதை வரையறு. அதனுடைய முக்கியத்துவத்தையும் அதன் வகைகளையும் கூறுக.

[OR]

b) What are the issues of social integration?
ஆ) சமூக ஒருமைப்பாட்டுக்கு இடையூரான காரணிகள் யாவை?

14. a) Explain respecting others / reverence.
அ) பிறரை மரியாதையுடன் நடத்துதல் பற்றி விளக்குக.

[OR]

b) Explain the democratic functioning and what do you understand by the term honesty?
ஆ) ஜனநாயகத்தின் முறைகளைப் பற்றி விளக்குக, மற்றும் நேர்மை பற்றி நீ அறிவது யாது?

G.T.N. ARTS COLLEGE (Autonomous)

Dindigul

(Affiliated to Madurai Kamaraj University)

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DEPARTMENT OF INFORMATION TECHNOLOGY

EXTERNAL QUESTION PAPER(EVEN)

2020–2021

13. a) Write a note on Secularism.

அ) மதச்சார்பின்மை குறித்து ஒரு குறிப்பு எழுதுக.

[அல்லது]

b) Explain the importance of social justice.

ஆ) சமூக நீதியின் முக்கியத்துவத்தை விளக்குக.

14. a) Discuss the various aspects of team spirit.

அ) கூட்டு முயற்சியின் பல்வேறு அம்சங்களைப் பற்றி விவாதிக்கவும்.

[அல்லது]

b) Explain the terms 'Integrity' and 'Commitment'

ஆ) 'ஒருமைப்பாடு' மற்றும் 'அர்ப்பணிப்பு' என்ற சொற்களை விளக்குக.

15. a) Explain the important values created by family.

அ) குடும்பத்தால் உருவாக்கப்பட்ட முக்கியமான மதிப்பகளை விளக்குக.

[அல்லது]

b) Discuss about role models.

ஆ) முன்மாதிரிகள் பற்றி விவாதிக்கவும்.

SECTION – C [3 X 10 = 30]

Answer Any THREE Questions.

16. Explain the need for value education in detail.

மதிப்புக்கல்வியின் அவசியத்தைப் பற்றி விரிவாக விளக்குக.

17. Discuss about love and justice in Christianity.

கிறிஸ்தவத்தில் அன்பு மற்றும் நீதி பற்றி விவாதிக்கவும்.

18. Write in detail about human rights.

மனித உரிமைகள் பற்றி வரிவாக எழுதுக.

19. Explain the following professional values.

(a) Accountability (b) Willingness to Learn

பின்வரும் தொழில்முறை மதிப்புகளை விளக்குக.

(அ) பொறுப்புணர்ச்சி (ஆ) கற்றுக்கொள்ள விருப்பம்

20. Describe how values can be promoted through educational institutions.

கல்வி நிறுவனங்கள் மூலம் மதிப்புகளை எவ்வாறு மேம்படுத்தாலம் என்பதை விவரிக்கவும்.

Reg. No:

G.T.N. ARTS COLLEGE (AUTONOMOUS)

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END SEMESTER EXAMINATIONS – APRIL 2021

Programme: All UG Final Year Students **Date: 16.06.2021**

Course Code: 17UVEV61 **Time: 10 am – 1pm**

Course Title : Value Education **Max. Marks :75**

SECTION – A [10 X 1 = 10]

Answer ALL the Questions.

Choose the Correct Answer.

1. Taking care of one's body, so that it can take care of the person is called _____ values.

[a] Mental [b] Physical

[c] Social [d] Spiritual

ஒருவரின் உடலை கவனித்துக் கொள்வது மற்றும் அந்த நபரை கவனித்துக் கொள்வது ------ மதிப்புகள் என்று அழைக்கப்படுகிறது.

[அ] மனம் [ஆ] உடல்

[இ] சமூக [ஈ] ஆன்மீக

2. _____ means working without having command from anyone.

[a] Self confidence [b] Self Discipline

[c] Self-initiative [d] Empathy

யாரிடமிருந்தும் கட்டளை இல்லாமல் வேலை செய்வது -------- என்பதாகும்:

[அ] தன்னம்பிக்கை [ஆ] சுய ஒழுக்கம்

[இ] சுய முயற்சி [ஈ] பச்சாதாபம்

3. _____ is the retirement stage in the life of a Hindu.

[a] Vanaprastha [b] Brahmacharya

[c] Grihastha [d] Sanyasa

13. a) *Write a note on Secularism.*

அ) மதச்சார்பின்மை குறித்து ஒரு குறிப்பு எழுதுக.

[அல்லது]

b) Explain the importance of social justice.

ஆ) சமூக நீதியின் முக்கியத்துவத்தை விளக்குக.

14. a) Discuss the various aspects of team spirit.

அ) கூட்டு முயற்சியின் பல்வேறு அம்சங்களைப் பற்றி விவாதிக்கவும்.

[அல்லது]

b) Explain the terms 'Integrity' and 'Commitment'

ஆ) 'ஒருமைப்பாடு' மற்றும் 'அர்ப்பணிப்பு' என்ற சொற்களை விளக்குக.

15. a) Explain the important values created by family.

அ) குடும்பத்தால் உருவாக்கப்பட்ட முக்கியமான மதிப்பகளை விளக்குக.

[அல்லது]

b) Discuss about role models.

ஆ) முன்மாதிரிகள் பற்றி விவாதிக்கவும்.

SECTION – C [3 X 10 = 30]

Answer Any THREE Questions.

16. Explain the need for value education in detail.

மதிப்புக்கல்வியின் அவசியத்தைப் பற்றி விரிவாக விளக்குக.

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பின்வரும் தொழில்முறை மதிப்புகளை விளக்குக.

(அ) பொறுப்புணர்ச்சி (ஆ) கற்றுக்கொள்ள விருப்பம்

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Reg. No:

G.T.N. ARTS COLLEGE (AUTONOMOUS)

(Affiliated to Madurai Kamaraj University)

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END SEMESTER EXAMINATIONS – APRIL 2021

Programme: All UG Final Year Students **Date: 16.06.2021**

Course Code: 17UVEV61 **Time: 10 am – 1pm**

Course Title : Value Education **Max. Marks :75**

SECTION – A [10 X 1 = 10]

Answer ALL the Questions.

Choose the Correct Answer.

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[a] Mental [b] Physical

[c] Social [d] Spiritual

ஒருவரின் உடலை கவனித்துக் கொள்வது மற்றும் அந்த நபரை கவனித்துக் கொள்வது ------ மதிப்புகள் என்று அழைக்கப்படுகிறது.

[அ] மனம் [ஆ] உடல்

[இ] சமூக [ஈ] ஆன்மீக

2. _____ means working without having command from anyone.

[a] Self confidence [b] Self Discipline

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யாரிடமிருந்தும் கட்டளை இல்லாமல் வேலை செய்வது ------- என்பதாகும்.

[அ] தன்னம்பிக்கை [ஆ] சுய ஒழுக்கம்

[இ] சுய முயற்சி [ஈ] பச்சாதாபம்

3. _____ is the retirement stage in the life of a Hindu.

[a] Vanaprastha [b] Brahmacharya

[c] Grihastha [d] Sanyasa

---- என்பது ஒரு இந்து வாழ்க்கையின் ஒய்வூதிய நிலையாகும்.

[அ] வனப்பிரஸ்தா [ஆ] பிரம்மச்சாரியா

[இ] கிரிஹஸ்தா [ஈ] சன்யாசா

_____ is the holy scripture of Christianity.

[a] Quran [b] Bagavad Gita

[c] Adi-Granth [d] Bible

கிறிஸ்தவத்தின் புனித நூல் -------- ஆகும்.

[அ] குர்ஆன் [ஆ] பகவத் கீதை

[இ] ஆதி – கிரந்த் [ஈ] பைபிள்

5. _____ is a government of the people, by the people and for the people.

[a] Secularism [b] Socialism

[c] Democracy [d] Gender Justice

----- என்பது மக்களின், மக்களால், மக்களுக்காக அமைக்கப்பட்ட அரசாங்கமாகும்.

[அ] மதச்சார்பின்மை [ஆ] பொது உடைமை

[இ] ஜனநாயகம் [ஈ] பாலின நீதி

6. Our Constitution guarantees _____ fundamental rights.

[a] five [b] six

[c] seven [d] eight

நம் அரசியலமைப்பு ---------- அடிப்படை உரிமைகளுக்கு உத்தவாதம் அளிக்கிறது.

[அ] ஐந்து [ஆ] ஆறு

[இ] ஏழு [ஈ] எட்டு

7. ___ is the state or quality of being adequately or well qualified.

[a] Competence [b] Team spirit

[c] Accountability [d] Honesty

------ என்பது போதுமான அல்லது நல்ல தகுதி வாய்ந்த தரமாகும்.

[அ] திறன் [ஆ] கூட்டு முயற்சி

[இ] பொறுப்புணர்ச்சி [ஈ] நேர்மை

8. Who should follow the professional codes of conduct evolved by the Bar council?

[a] Teacher [b] Doctor

[c] Accountants [d] Lawyer

வழக்குரைஞர் கழகம் உருவாக்கிய தொழில் முறை நடத்தை நெறிமுறைகளை யார் பின்பற்ற வேண்டும்?

[அ] ஆசிரியர் [ஆ] மருத்துவர்

[இ] கணக்காளர்கள் [ஈ] வழக்கறிஞர்

9. _____ is one in which parents and their unmarried sons and daughters live together?

[a] Nuclear family [b] Extended family

[c] Joint family [d] Large Joint family

------ என்பது பெற்றோர்களும் அவர்களுடைய திருமணமாகாத மகன்களும் மகள்களும் ஒன்றாக வாழ்வதாகும்.

[அ] தனிக்குடும்பம் [ஆ] நீட்டிக்கப்பட்ட குடும்பம்

[இ] கூட்டுக்குடும்பம் [ஈ] பெரிய கூட்டுக்குடும்பம்

10. Who is the founder of Microsoft?

[a] Narayan Murthy [b] Bill Gates

[c] Premji [d] Steve Jobs

மைக்ரோசாப்டின் நிறுவனர் யார்?

[அ] நாராயண் மூர்த்தி [ஆ] பில்கேட்ஸ்

[இ] பிரேம்ஜி [ஈ] ஸ்டீவ் ஜாப்ஸ்

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Discuss the significance of values.

அ) மதிப்புகளின் முக்கியத்துவம் பற்றி விவாதிக்கவும்.

[அல்லது]

b) Write a note on self confidence.

ஆ) தன்னம்பிக்கை குறித்து ஒரு குறிப்பு எழுதுக.

12. a) Explain the five principles of Islam.

அ) இஸ்லாமின் ஐந்து கொள்கைகளை விளக்குக.

[அல்லது]

b) What are the duties of a Sikh?

ஆ) ஒரு சீக்கியரின் கடமைகள் என்ன?

SECTION – C [3 X 10 = 30]

Answer Any THREE Questions.

16. Explain briefly about android development tools.

17. Explain about the native android activities.

18. How to create menu in android application and explain with example.

19. How to record the video using media recorder. Explain.

20. Explain briefly about configuring the map views.

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END SEMESTER EXAMINATION – APRIL 2021

Programme: B.Sc. IT **Date: 17.6.2021**

Course Code: 17UITC61 **Time: 10 am. to 1 pm.**

Course Title.: Android Programming **Max. Marks :75**

SECTION – A **[10 X 1 = 10]**

Answer ALL the Questions.

Choose the Correct Answer.

1. Android applications are written using the _____language.

   [a] C [b] C++

   [c] Java [d] Pascal

2. The DDMS tool is fully integrated into _____ and is available from the DDMS perspective.

   [a] Eclipse [b] SDK

   [c] API [d] CDD

3. View Groups that perform the former function are generally referred to as _____.

   [a] Fragments [b] Layouts

   [c] Surface View [d] Adapter View

4. *We can create your own Adapter classes and build your own* _____*derived controls.*

[a] Surface View [b] Adapter View

[c] On Activity Result [d] Activity Intents

5. We can specify an alternative graphic using the _____ attribute.

[a] Android:icon [b] android:name

[c] android:logo [d] android:theme

6. A _____group is a group of items displaying circular buttons, in which only one item can be selected at any given time.

[a] radio button [b] Checkboxes

[c] Icons [d] Intents

7. _____embedded in to an application are hosted within the parent application's process.

[a] Widgets [b] Layouts

[c] Views [d] Broadcast

8. _____include a series of methods that provide access to many of the properties and methods available on native views.

[a] Widgets [b] Remote Views

[c] Broadcast [d] Wall paper

9. _____ is the base class you extend to create an activity that can include a Map View.

[a] Map Activity [b] Map Controller

[c] My Location Overlay [d] Overlay

10. The _____use saw web service to implement its look up that may not be included on all Android devices.

[a] Reverse Geo Coding [b] Geo Coder

[c] Forward geocoding [d] Map View

SECTION – B **[5 X 7 = 35]**

Answer ALL the Questions.

11. a) Write the features of Android.

[OR]

b) Describes the Android Architecture.

12. a) Discuss about the layout classes available in the Android SDK.

OR]

b) Write the Android Fragment Classes.

13. a) Describes the way to implement a dialog in android.

[OR]

b) Discuss about the specialized input dialogs.

14. a) Write the components of creating a widgets.

[OR]

b) Describes the Widgets attributes in android projects

15. a) List the classes used to support android maps.

[OR]

b) Write about the adding and removing overlays in Applications.

15. a) Write about identifying resource requirements.

[OR]

b) Explain the test reporting in software testing.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. Explain detail in Life Cycle Model in software testing.
17. Demonstrate the scenario testing.
18. Elaborate multiphase testing model.
19. Analyse the methodology for selecting test cases.
20. Elaborate testing tasks size and effort estimation in software testing.

Reg. No:

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END SEMESTER EXAMINATION – APRIL 2021

Programme: B.Sc. IT **Date: 18.6.2021**
Course Code: 17UITC62 **Time: 10 am. to 1 pm.**
Course Title : Software Testing **Max. Marks :75**

SECTION – A **[10 X 1 = 10]**

Answer ALL the Questions.

Choose the Correct Answer.

1. Which of the following term describes testing?
   [a] Finding broken code
   [b] Evaluating deliverable to find errors
   [c] A storage of all projects
   [d] none of the mentioned
2. What is cycloramic complexity?
   [a] Black box testing [b] White box testing
   [c] Yellow box testing [d] Gray box testing
3. Which testing is used when shrink-wrapped software products are being established and part of an integration testing?
   [a] Integration testing [b] Validation testing
   [c] Regression testing [d] Smoke-testing

4. _____ are those software mistakes that occurred during the coding phase.

[a] Defects [b] Failures

[c] Errors [d] Bugs

5. Functional testing is a _____.

[a] Test design technique [b] Test level

[c] SDLC Model [d] Test Type

6. Which is not the right approach of incremental testing approach?

[a] Big bang approach [b] Top-down approach

[c] Functional incrimination [d] Bottom-up approach

7. _____identifies current bottlenecks in your web or client/server, application and verifies it meets or exceeds key performance measures.

[a] Performance Testing [b] Load testing

[c] Stress Testing [d] Reliability Testing

8. Which of the following situations, the Regression Testing is not performed?

[a] When project manager asks the perform

[b] When database system is changed

[c] When new functionality is introduced

[d] When system is installed on different hardware configuration than Previously tested

9. The _____ is a graphical representation of your test plan.

[a] Test plan view [b] Test plan tree

[c] Test plan graph [d] Test plan hierarchy

10. In size-oriented metrics, matrices are developed based on the_____.

[a] minimization of development schedule

[b] for strategic purposes

[c] assessing project quality on ongoing basis

[d] minimization of development schedule and assessing project quality on ongoing basis

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Explain in detail about Quality, Quality assurance and quality control in software testing.

[OR]

b) Write about verification and validation in software testing.

12. a) Write about black box testing?

[OR]

b) Describe about integration testing.

13. a) Explain functional testing versus non-functional testing.

[OR]

b) Write about acceptance testing in system testing.

14. a) Explain writing test cases in performance testing.

[OR]

b) Discuss tools for performance testing.

19. *Write notes on Cursors.*

20. Discuss on Discretionary access control through Grant and Revoke commands.

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END SEMESTER EXAMINATION – APRIL-2021

Programme : B.Sc. IT **Date : 18.6.2021**
Course Code: 17UITC41 **Time: 2 pm. to 5 pm.**
Course Title : Relational Database Management Concept **Max. Marks :75**

SECTION – A **[10 X 1 = 10]**

Answer ALL the Questions.

Choose the Correct Answer.

1. _____ is a more abstract, high-level data model that has a good description of the data is an enterprise.
   [a] Abstract Data Model [b] Relational Data Model
   [c] Semantic Data Model [d] Dynamic Data Model
2. Which attributes are used to record information.?
   [a] Relationship [b] Descriptive
   [c] Instance [d] Ternary
3. Representing data in a relational model is _____.
   [a] Relation [b] Domain
   [c] Table [d] Database
4. A query is evaluated using _____ of each input relation.
   [a] query [b] entity
   [c] attribute [d] instances

5. *Through which evaluation strategy SQL query is evaluated?*

[a] Triggers *[b] Conceptual*

[c] Query [d] Relational

6. ____ is a database design technique that organises tables in a manner that reduces redundancy &dependency of data.

[a] Triggering [b] Decompositions

[c] Normalization [d] Dependencies

7. In Pl/SQL, an error condition is called an _____

[a] Cursor [b] Trigger

[c] Packages [d] Exception

8. ____ are schema objects that groups logically related Pl/SQL types, variables & sub programs

[a] Cursor [b] Trigger

[c] Packages [d] Errors

9. ____ is the information that should not be disclosed to unauthorized users.

[a] Secrecy [b] Integrity

[c] Availability [d] Mechanism

10. ____ provides the foundation for modern authentication.

[a] Security [b] Decryption

[c] Authentication [d] Encryption

SECTION – B **[5 X 7 = 35]**

Answer ALL the Questions.

11. a) List out and Explain the advantages of DBMS

[OR]

b) Write notes on the three Maps of ER Model.

12. a) Describe how entity set is mapped to relation.

[OR]

b) Write notes on Tuple relational calculus

13. a) With suitable examples explain group BY and HAVING clauses

[OR]

b) Discuss on functional Dependencies with an example.

14. a) Write notes on procedure in PL/SQL.

[OR]

b) Explain Triggers in PL/SQL

15. a) Explain Access control.

[OR]

b) Write notes on multilevel relations and polyinstantiation.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. Explain conceptual design with ER model.

17. Write notes on Integrity constraints over relations with examples.

18. Discuss the Nested Queries.

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END SEMESTER EXAMINATION – APRIL 2021

Programme: B.Sc. IT **Date : 19.6.2021**
Course Code: 17UITE61 **Time : 10 am to 1 pm.**
Course Title : Introduction to Unified Modeling Language **Max. Marks :75**

SECTION – A ***[10 X 1 = 10]***

Answer ALL the Questions.

Choose the Correct Answer.

1. OMT Consists of _____ Phases.

   [a] 4 [b] 3

   [c] 2 [d] 6

2. A / An _____ model presented by data flow and constraints.

   [a] object [b] dynamic

   [c] functional [d] static

3. OCL stands for _____.

   [a] Object Constraint Language

   [b] Object Constant Language

   [c] Object Constraint Loop

   [d] Object Class Language

4. _____coupling involves the amount and complexity of messages between components.

[a] content [b] interaction

[c] common [d] control

5. Use case models that can be summarized under which of this category?

[a] use case diagram [b] use case description

[c] all of the mentioned [d] none of the mentioned

6. What are the notations for the use case diagrams?

[a] use case [b] actor

[c] prototype [d] use case and actor

7. The noun phrase approach was proposed by _____.

[a] rebecca wirfs-Brock [b] rumbaugh

[c] booch [d] jacobson

8. _____ are an important mechanism for classifying objects.

[a] Classes [b] Object

[c] Use case [d] None of the mentioned

9. _____associations can be defined in terms of other associations.

[a] Ternary [b] Directed actions

[c] Implementation [d] Relevant

10. _____ can be derived from scenario testing.

[a] Object [b] Class

[c] Attributes [d] Super

SECTION – B **[5 X 7 = 35]**

Answer ALL the Questions.

11. a) Explain in detail about Rumbaugh modeling technique.

[OR]

b) Give short note on object oriented software engineering.

12. a) Explain the Static and Dynamic model.

[OR]

b) Describe the use case diagram with suitable example.

13. a) Write short note on Business Object Analysis.

[OR]

b) Explain the guidelines for developing effective documentation.

14. a) Explain the common class patterns approach.

[OR]

b) What are the guidelines for selecting candidate classes from the relevant & fuzzy categories of classes?

15. a) Explain a-part-of-relationship.

[OR]

b) List the guidelines for identifying super-sub relationships.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. Briefly explain about Unified Approach.

17. Explain the UML class diagram.

18. Explain Developing Effective Documentation.

19. Briefly explain about Classes, Responsibilities and collaboration.

20. Explain about Associations.

19. Explain about Call by value and Copy-Restore with example.

20. Explain in detail about the characteristics of Peephole Optimization.

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END SEMESTER EXAMINATION – APRIL 2021

Programme : B.Sc. Information Technology **Date: 19.6.2021**
Course Code: 17UITE62 **Time: 10 am.to 1 pm.**
Course Title: Compiler Design **Max. Marks :75**

SECTION – A [10 X 1 = 10]

Answer ALL the Questions.

Choose the Correct Answer.

1. Hierarchical Analysis is also called as _____.

[a] Semantic Analysis [b] Process Analysis

[c] Syntax Analysis [d] Function Analysis

2. A syntax-directed definition uses a context-free grammar to specify the syntactic structure of the _____.

[a] Output [b] Intermediate Process

[c] Syntax [d] Input

3. A grammar-oriented compiler technique is called as _____.

[a] Syntax Directed Translation [b] Token Generation

[c] Translation Directed [d] Lexical Directed Translation

4. A _____ is a context-free grammar in which program fragments called semantic actions are embedded within the right sides of productions.

[a] Translation Scheme [b] Semantic Analyser

[c] Lexical Analyzer [d] Token Generation

5. The declarations section includes declarations of variables, _____ constants and regular definitions.

[a] Manifest [b] Auxiliary

[c] Translation [d] Resultant

6. The output of Lex Compiler is _____.

[a] Lex Specification [b] Lex Output

[c] Transition Table [d] Output Buffer

7. _____ type of error indicates an arithmetic expression with unbalanced parentheses.

[a] Lexical [b] Syntactic

[c] Logical [d] Semantic

8. _____ can be represented diagrammatically by a labelled directed graph called a transition graph.

[a] DFA [b] NFA

[c] LEX [d] ANA

9. Two basic blocks are said to be _____ if they compute the same set of expressions.

[a] same [b] equivalent

[c] live [d] effective

10. A transformation of a program is called _____ if it can be performed by looking only at the statements in a basic block.

[a] Vital [b] Global

[c] Local [d] Sentinel

SECTION – B **[5 X 7 = 35]**

Answer ALL the Questions.

11. a) Write short notes on preprocessors and its functions.

[OR]

b) Write short notes on algorithm on simulating a DFA.

12. a) Comment on sentinels with diagram.

[OR]

b) Write about Parse Tree with its properties.

13. a) Write short notes on the model of Lex Compiler.

[OR]

b) What are the types of Three-Address Statements?

14. a) Write about Dangling Reference with an example.

[OR]

b) Write short notes on Error-Recovery Strategies.

15. a) Write about Next-Use Information.

[OR]

b) Discuss about the Primary Structure-preserving Transformations on basic blocks.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. Write in detail about phases of a compiler.

17. Explain about YACC Parser Generator.

18. Write in detail about Nondeterministic and Deterministic Finite Automata.

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END SEMESTER EXAMINATION – APRIL 2021

Programme : B. Sc Information Technology **Date: 19.6.2021**
Course Code: 17UITC42 **Time: 2 pm. to 5 pm.**
Course Title : Operating System Concepts **Max. Marks :75**

SECTION – A [10 X 1 = 10]

Answer ALL the Questions.

Choose the Correct Answer.

1. The address of the next instruction to be executed by the current process is provided by the _____.

   [a] CPU Register [b] Program Counter
   [c] Process Stack [d] Pipe

2. To access the services of operating system, the interface is provided by ___.

   [a] API [b] Library
   [c] System Call [d] Assembly instructions

3. Semaphore is a/an _____to solve the critical section problem

   [a] Hardware for a system [b] Program for a system
   [c] Integer Variable [d] Special instruction

4. Concurrent access to shared data may result in_____.

   [a] Data consistency [b] Data inconsistency
   [c] Data Security [d] Data Insecurity

5. For sharable resources, Mutual exclusion _____

[a] is required [b] Not required

[c] May be or May not be [d] Must required

6. Which of the following scheduling algorithms gives minimum average waiting time?

[a] SJF [b] FCFS

[c] Round Robbin [d] Priority

7. Which one of the following is the address generated by CPU?

[a] Physical Address [b] Logical Address

[c] Absolute address [d] Temporary Address

8. Swap space exists in _____

[a] Primary [b] Secondary

[c] CPU [d] Both a & b

9. The information about all files is kept in _____

[a] Swap Space [b] Operating System

[c] Separate Directory Structure [d] Both b & c

10. SSTF algorithm, like SJF _____ of some requests.

[a] May cause starvation [b] Will cause Starvation

[c] Dose not cause Starvation [d] Cause aging

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Explain about operating system Architecture?

[OR]

b) Discuss about Inter process Communication?

12. a) Describe about Mutual Exclusion?

[OR]

b) Write about Monitors in detail?

13. a) Explain about Deadlock detection with their types?

[OR]

b) Discuss about Scheduling Criteria?

14. a) Explain about Fixed Partition Multiprogramming?

[OR]

b) Explain about FIFO and LRU page Replacement algorithm with example?

15. a) Why Disk scheduling is Necessary Discuss?

[OR]

b) Describe about Free Space Management?

SECTION – C [3 X 10 = 30]

Answer Any THREE Questions.

16. Explain in detail about Interrupts?
17. Briefly explain about Software Solutions to the Mutual Exclusion Problem?
18. Discuss about any three Processor Scheduling Algorithms with example?
19. Explain about Memory Hierarchy and Memory Management Strategies?
20. Discuss about FCFS, SSTF and SCAN Disk scheduling strategies?

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END SEMESTER EXAMINATION – APRIL 2021

Programme : B. Sc. Information Technology **Date: 21.6.2021**
Course Code: 17UITA41 **Time: 2 pm. to 5 pm.**
Course Title : Numerical Methods **Max. Marks :75**

SECTION – A [10 X 1 = 10]

Answer ALL the Questions.

Choose the Correct Answer.

1. $2x+\cos x-1=0$ is called a _____.

   [a] Transcendental equations [b] Algebraic equation

   [c] Trigonometric equation [d] Simple equation

2. The order of convergence of the Newton – Rapson method is attest _____.

   [a] 0 [b] 1

   [c] 2 [d] 3

3. Stirling's formula is the _____ of gauss forward and gauss backward interpolation method

   [a] addition [b] average

   [c] difference [d] multiplication

4. $x=\frac{(y-y_1)(y-y_2)\ldots(y-y_n)}{(y_0-y_1)(y_0-y_2)\ldots(y_0-y_n)}x_0+\frac{(y-y_0)(y-y_2)\ldots(y-y_n)}{(y_1-y_0)(y_1-y_2)\ldots(y_1-y_n)}x_1+\ldots\ldots$

$\ldots\ldots+\frac{(y-y_0)(y-y_1)\ldots(y-y_{n-1})}{(y_n-y_0)(y_n-y_1)\ldots(y_n-y_{n-1})}xn$

[a] Gauss backward interpolation method

[b] Gauss forward interpolation formula

[c] Stirling's formula

[d] Inverse interpolation formula

5. The coefficient matrix $A=\begin{pmatrix}1 & 6 & -2\\ 4 & 1 & 1\\ -3 & 1 & 7\end{pmatrix}$ is _____.

[a] Diagonally dominant [b] Not diagonally dominant

[c] Rectangular matrix [d] Row matrix

6. Solve $x+y=2;\ 2x+3y=5.$

[a] $x=1, y=1$ [b] $x=3, y=(-1)$

[c] $x=5, y=(-3)$ [d] $x=2,0$

7. $\int_{x0}^{xn} f(x)dx=\frac{h}{2}\left[(y_0+y_n)+2(y_1+y_2+\ldots+y_{n-1})\right]$ is known as _____.

[a] Simpson's

[b] Simpson's $3/8^{th}$ rule

[c] Trapezoidal rule

[d] Newton's cote's quadrature formula

8. The error in Simpson's one third rule is order _____.

[a] h^2 [b] h^3

[c] h^4 [d] h^6

9. $y_1=y_0+\frac{1}{2}(k_1+k_2)$ is known as _____.

[a] Second order Runge –kutta formula

[b] Third order Runge – kutta formula

[c] Fourth order Runge – kutta formula

[d] Euler's method

10. In third order Runge – kutta formula, K_2 is _____.

[a] $hf(x_0,y_0)$ [b] $hf\left(x_0+\frac{h}{2},y_0+\frac{k_1}{2}\right)$

[c] $hf(x_0+h,y_0+k^1)$ [d] $hf(x_0+h,y_0+k_1)$

SECTION – B **[5 X 7 = 35]**

Answer ALL the Questions.

11. a) Find the real root of the equation $\cos x=3x-1$ correct to 4 decimal places using successive approximation method

[OR]

b) Find the negative root of $x^3-2x+5=0$ correct to 3 places of decimals by the Newton-Raphson method.

12. a) Using Gaussian elimination method solve the following

$x+y+z=9;\ 2x-3y+4z=13;\ 3x+4y+5z=40.$

[OR]

b) *Using gauss Jordan method solve the following*

$5x-2y+3z=18;\ x+7y-3z=-22;\ 2x-y+6z=22.$

13. a) A function $y=f(x)$ is given by the following table. Find f 10.2 by a suitable formula.

x	0	1	2	3	4	5	6
Y=f(x)	176	185	194	203	212	220	229

[OR]

b) Apply gauss backward interpolation formula to find $y(25)$ for the following data.

X	20	24	28	32
Y	2854	3162	3544	3992

14. a) Evaluate $\int_0^{\frac{\pi}{2}} \sin x dx$ by Simpson's $\frac{1}{3}$ rule dividing the range into six equal parts.

[OR]

b) Find $\frac{dy}{dx}$ at $x=51$ from the following data.

X	50	60	70	80	90
Y	19.96	36.65	58.81	77.21	94.61

15. a) Using Taylor's method solve $\frac{dy}{dx}=1+xy$ with $y_0=2$. Find (i) $y(0.1)$ (ii) $y=0.2$

[OR]

b) Solve $\frac{dy}{dx}=1-y\ y(0)=0$ using Euler's method, Find y at $x=0.1$ and $x=0.2$. Compare the result with results of the exact solution.

SECTION – C **[3 X 10 = 30]**

Answer Any THREE Questions.

16. Find the real root lying between 1 and 2 of the equation $x^3-3x+1=0$ upto 3 places of decimals by using regular – falsi method.

17. Tabulate $y=x^3$ for $x=2,3,4,5$ and calculate the cube root of 10 correct to three decimal places.

18. Find the inverse of the matrix $A=\begin{pmatrix}2&1&1\\3&2&3\\1&4&9\end{pmatrix}$ using Gaursian method.

19. Evaluate $\int_0^{10}\frac{dx}{1+x^2}$ by using i) Trapezoidal rule, ii) Simpson one third rule.

20. Compute $y(0.1)$ and $y(0.2)$ by Runge – Kutta method of 4^{th} order for the differential equation. $\frac{dy}{dx}=xy+y^2,\ y(0)=1.$

15. a) Discuss the in-situ-ex-situ conservation methods.

அ) in-situ-ex-situ முறையில் பல்லுயிர் பாதுகாப்பு குறித்து விவாதி.

[அல்லது]

b) Give an account of Hotspots and Cool spots.

ஆ) Hotspots and Cool spots குறித்து குறிப்பு எழுதுக.

SECTION – C [3 X 10 = 30]

Answer Any THREE Questions.

16. Write an essay on ozone layer depletion.

ஓசோன் படலம் ஓட்டையாதல் குறித்து கட்டுரை வரைக.

17. Discuss the structure and functions of an ecosystem.

சூழ்நிலை மண்டலத்தின் அமைப்பு மற்றும் செயல்பாடு குறித்து விவாதி.

18. Explain various non conventional energy sources.

பல்வேறு வகையான மரபுசாரா ஆற்றல் குறித்து விவரி.

19. Explain various environment laws followed in India.

இந்தியாவில் சுற்றுசூழல் சட்டங்கள் குறித்து விவரி.

20. Explain different types of biodiversity.

பல்லுயிர்தொகுப்பின் வகைகள் குறித்து விளக்குக.

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END SEMESTER EXAMINATIONS – APRIL 2021

Programme: All UG Programmes **Date: 24.06.2021**

Course Code: 17UESV51 **Time: 10 am – 1 pm**

Course Title : Environmental Science **Max. Marks : 75**

SECTION – A [10 X 1 = 10]

Answer ALL the Questions.

Choose the Correct Answer.

1. When was the environmental education group established in India?

[a] 1979 [b] 1969

[c] 1999 [d] 1953

இந்தியாவில் சுற்றுசூழல் கல்வி குழுமம் எப்பொழுது தொடங்கப்பட்டது?

[அ] 1979 [ஆ] 1969

[இ] 1999 [ஈ] 1953

2. Acid rain is caused by _____.

[a] Acidic pollutants [b] Fossil fuels

[c] Atmospheric [d] None of the above

அமில மழை ------- உருவாகிறது.

[அ] அமில நச்சுக்களால் [ஆ] புதை படிமங்களால்

[இ] வளிமண்டல வெப்பநிலை உயர்வால் [ஈ] இவற்றுள் ஏதுமல்லை

3. Food chain is defined as _____.

[a] eating and being eaten [b] producer and consumer

[c] bacteria and fungai [d] decomposer and producer

உணவுச்சங்கிலி ------ என்று வரையறுக்கப்படுகிறது.

[அ] உண்பன மற்றும் உண்ணப்படுவன

[ஆ] நுகர்வோர் மற்றும் உற்பத்தியாளர்

[இ] பாக்டீரியா மற்றும் பூஞ்சை

[ஈ] சிதைப்பன மற்றும் உற்பத்தியாளர்

4. *The term ecosystem was coined in 1935 by _____.*

[a] Odum *[b] Smith*

[c] Darwin *[d] Arthur Tansley*

சுற்றுசூழுல் என்ற வார்த்தையை 1935-ல் பயன்படுத்தியது ---------.

[அ] ஓடம் [ஆ] சுமித்

[இ] டார்வின் [ஈ] ஆர்தர் டான்ஸ்லி

5. Non-renewable sources of energy is otherwise known as _____.

[a] non conventional energy source [b] conventional energy source

[c] permanent source [d] none

புதுப்பிக்க இயலா ஆற்றல் இவ்வாறும் அழைக்கப்படலாம்.

[அ] மரபுசாரா எரிசக்தி ஆற்றல் [ஆ] மரபுசார் எரிசக்தி ஆற்றல்

[இ] நிலையான ஆற்றல் [ஈ] இவற்றுள் ஏதுமில்லை.

6. Swachh Bharat Unnat Bharat Abhiyan is comes under _____.

[a] sanitization [b] public health

[c] waste from wealth [d] small savings scheme

சுவச் பாரத் உன்னத் பாரத் திட்டம் ---------- ன் கீழ் வரும்.

[அ] தூய்மை [ஆ] பொது சுகாதாரம்

[இ] கழிவு மறுசுழற்சி [ஈ] சிறு சேமிப்பு

7. Pine trees is commonly found in ---------- forests

[a] broad leaf forest [b] evergreen forest

[c] needle forest [d] deciduous forest

பைன் மரம் பொதுவாக எங்கு காணப்படுகிறது?

[அ] அகன்ற இலைக்காடுகள் [ஆ] பசுமைமாறாக்காடுகள்

[இ] ஊசியிலைக்காடுகள் [ஈ] இலையுதிர்காடுகள்

8. How many types of forests present in Tamil Nadu?

[a] 9 [b] 3 [c] 6 [d] 7

தமிழ்நாட்டில் காணப்படும் காடுகளின் வகைகள் எத்தனை?

[அ] 9 [ஆ] 3 [இ] 6 [ஈ] 7

9. ---------- number of mega diversity countries is present in the world

[a] 9 [b] 6 [c] 12 [d] 15

உலகத்தில் உள்ள அதிக பல்லுயிர்பெருக்க நாடுகள் எத்தனை?

[அ] 9 [ஆ] 6 [இ] 12 [ஈ] 15

10. The first biosphere reserve declared in India in 1986 is ----------

[a] Gir forest [b] Nilgiris

[c] Palani hills [d] Agasthiyaimalai

இங்கு 1986-ல் முதன்முதலில் இந்தியாவில் அறிவிக்கப்பட்ட பாதுகாக்கப்பட்ட உயிர் கோளம் ---------.

[அ] கிர் காடுகள் [ஆ] நீலகிரி

[இ] பழனி [ஈ] அகஸ்தியர் மலை

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Give a brief account on Environmental education in India

அ) இந்தியாவில் சுற்றுச்சூழல் கல்வி- சிறு குறிப்பு வரைக.

[அல்லது]

b) Give an account of cloud bursting.

ஆ) மேகவெடிப்பு பற்றி விவரி.

12. a) Briefly explain the importance of food chain.

அ) உணவுச்சங்கிலியின் முக்கியத்துவத்தை விவரி.

[அல்லது]

b) Discuss the structural features of an ecosystem.

ஆ) சூழ்நிலை அமைப்பு காரணிகள் குறித்து விவாதி.

13. a) Explain the need of waste material recycling.

அ) கழிவு மறுசுழற்சியின் முக்கியதுவத்தை விவரி.

[அல்லது]

b) Give a short notes on non conventional energy sources.

ஆ) மரபு சாரா எரிசக்தி குறித்து சிறு குறிப்பு வரைக.

14. a) What is resource depletion and explain the root causes of the same

அ) வளம் குன்றல் என்றால் என்ன? அதற்கான காரணிகள் குறித்து விவரி.

[அல்லது]

b) Explain the effects of air pollution.

ஆ) காற்று மாசுபாட்டினால் ஏற்படும் விளைவுகள் குறித்து விவரி.

19. a) List out the Routing Principles.

b) List out the various types of Routing. Explain each in detail.

20. Explain the message transfer using Simple Mail Transfer Protocol.

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END SEMESTER EXAMINATION – APRIL 2021

Programme: B.Sc. IT **Date: 25.6.2021**

Course Code: 17UITC51 **Time: 10 am. to 1 pm.**

Course Title : Data Communication And Computer Networks **Max. Marks :75**

SECTION – A **[10 X 1 = 10]**

Answer ALL the Questions.

Choose the Correct Answer.

1. The _____ layer lies between the network layer and session layer.

[a] Physical [b] Data Link

[c] Transport [d] Presentation

2. Asynchronous Transmission have _____.

[a] a start bit [b] a stop bit

[c] both a and b [d] all of the above

3. BSC is a _____ protocol

[a] character oriented [b] bit- oriented

[c] byte-oriented [d] count oriented

4. Which topology requires a multipoint connection?

[a] mesh [b] bus

[c] star [d] ring

5. In FDDI, data normally travel on _____

[a] the primary ring [b] the secondary ring

[c] both rings [d] neither ring

6. Each DQDB bus is _____

[a] unidirectional [b] bi-directional

[c] connected to the end [d] none of the above

7. Which of the following is not an internetworking device?

[a] bridge [b] gateway

[c] router [d] all of the above

8. The client program is _____ because it terminates after it has been served.

[a] active [b] passive

[c] finite [d] infinite

9. Remote login can involve _____.

[a] NVT [b] TELNET

[c] TCP/IP [d] All

10. When a message is sent using SMTP____ UA are involved.

[a] only one [b] only two

[c] only three [d] at least two

SECTION – B

[5 X 7 = 35]

Answer ALL the Questions.

11. a) Explain the types of transmission modes.

[OR]

b) Explain about twisted pairs.

12. a) Explain about Sliding Window Protocol.

[OR]

b) What is network topology? Explain different types of network topologies.

13. a) Explain the concept of Token Ring (IEEE 802.5).

[OR]

b) Explain in detail about SONET.

14. a) Explain the various fields of the TCP segment header.

[OR]

b) Short notes on UDP.

15. a) What is Domain Name System? Explain.

[OR]

b) Explain about Simple Network Management Protocol.

SECTION – C

[3 X 10 = 30]

Answer Any THREE Questions.

16. Describe OSI Reference Model.

17. Discuss the approaches used for error control in networking.

18. Illustrate the various switching techniques used in WAN.

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END SEMESTER EXAMINATION – APRIL 2021

Programme : B.Sc. (Information Technology) **Date: 26.6.2021**
Course Code: 17UITC31 **Time: 2 pm. to 5 pm.**
Course Title : Object Oriented Programming in C++ **Max. Marks :75**

SECTION – A ***[10 X 1 = 10]***

Answer ALL the Questions.

Choose the Correct Answer.

1. Which Feature of OOP illustrated the code reusability?

   [a] Polymorphism [b] Abstraction

   [c] Encapsulation [d] Inheritance

2. Overloaded functions are _____.

   [a] very long functions that can hardly run

   [b] one function containing another one or more functions inside it

   [c] two or more functions with the same name but different number of parameters or type

   [d] very long functions

3. What is default access specifier for data members or member functions declared within a class without any specifier, in C++?

   [a] Private [b] Protected

   [c] Public [d] Depends on compiler

4. Which among the following is called first, automatically, whenever an object is created?

[a] Class [b] Constructor

[c] New [d] Trigger

5. An operator function is created using _____ keyword.

[a] iterator [b] allocator

[c] constructor [d] operator

6. A derived class with only one base class is called _____ inheritance.

[a] single [b] multiple

[c] multilevel [d] hierarchical

7. C++ supports run time polymorphism with the help of virtual functions, which is called _____ binding.

[a] dynamic [b] run time

[c] early binding [d] static

8. The unformatted input functions are handled by _____.

[a] ostream class [b] instream class

[c] istream class [d] bufstream class

9. Which of the following is not used as a file opening mode?

[a] ios::trunc [b] ios::binary

[c] ios::in [d] ios::ate

10. What is meant by the template parameter?

[a] It can be used to pass a type as an argument

[b] It can be used to evaluate a type

[c] It can of no return type

[d] It can be used to delete a type

SECTION – B [5 X 7 = 35]

Answer ALL the Questions.

11. a) Explain the structure of a C++ program.

[OR]

b) What is function overloading? Give examples.

12. a) How to specify a class in C++?

[OR]

b) What is a constructor? List some of the special properties of constructor function.

13. a) What is Operator Overloading?

[OR]

b) Explain single inheritance with an example.

14. a) Explain arrays of pointers in C++.

[OR]

b) Write short notes on I/O stream classes.

15. a) What are the classes used for File Stream Operations?

[OR]

b) Explain with example, how Class templates are implemented?

SECTION – C [3 X 10 = 30]

Answer Any THREE Questions.

16. Describe any five basic concepts of Object Oriented Programming.

17. Illustrate the concept of Multiple Constructors in a class.

18. Discuss about Overloading Unary Operators in C++ with an example.

19. Explain in detail about virtual function and polymorphism with example.

20. How to Open multiple Files using Open() function in C++?