

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

V SEMESTER END EXAMINATIONS - DEC - 2023(R/S)

DATE: 27/12/2023 to 04/01/2024

		V SEMESTER END EXAMINATIONS - DEC - 2023(R/S)										DATE: 27/12/2023 to 04/01/2024						
DATE	TIME	B.Sc					B.VOC					B.Com						
		M.P.C	M.P.E.S	M.E.C.S	M.S.C.S	M.C.C.S	CBZ	DATA SCIENCE	IOT	IT-ITeS	WEBSITE DEVELOPMENT & PHP	GEN	T.P	COMP	LOG	BBA	BCA	
27-12-2023	02:00 PM to 05:00 PM	RING THEORY & VECTOR CALCULUS CBMAT501A (20-21)	RING THEORY & VECTOR CALCULUS CBMAT501A (20-21) NUMERICAL METHODS R20MATAS01 (2022-23)	RING THEORY & VECTOR CALCULUS CBMAT501A (20-21)	RING THEORY & VECTOR CALCULUS CBMAT501A (20-21) NUMERICAL METHODS R20MATAS01 (2022-23)	RING THEORY & VECTOR CALCULUS CBMAT501A (20-21)	CELL BIOLOGY, GENETICS & PLANT BREEDING CBBOT501A (20-21) R20BOTAS01 PLANT TISSUE CULTURE R20BOTCS01 (2023-24)	BIG DATA TECHNOLOGY DSBOT502 (20-21) BIG DATA TECHNOLOGY R20BOTDS01 (2022-23)	BIG DATA TECHNOLOGY IOTBOT502 (20-21) ROBOTICS AND ITS APPLICATIONS R20IOTAS01 (2022-23)	OPERATING SYSTEM ITOS01 (21-22)	WSCMS01 (21-22) CONTENT MANAGEMENT SYSTEM R20WSS01 (2022-23)	BUSINESS LAWS CBBL501 (17-18)	BUSINESS LAWS CBBL501 (17-18)	BUSINESS LAWS CBBL501 (17-18) MANAGEMENT ACCOUNTING R20COMCS01 (2022-23)	BUSINESS LAWS CBBL501 (17-18)	BUSINESS LAWS CBBL501 (17-18) STRESS MANAGEMENT R20BBA501 (2022-23)	ADVANCED JAVA CBBCAS01 (17-18) PYTHON R20BCAS01 (2022-23)	
28-12-2023	02:00 PM to 05:00 PM	LINEAR ALGEBRA CBMAT502A (20-21)	LINEAR ALGEBRA CBMAT502A (20-21) MATHEMATICAL SPECIAL FUNCTIONS R20MATAS02 (2022-23)	LINEAR ALGEBRA CBMAT502A (20-21)	LINEAR ALGEBRA CBMAT502A (20-21) MATHEMATICAL SPECIAL FUNCTIONS R20MATAS02 (2022-23)	LINEAR ALGEBRA CBMAT502A (20-21)	PLANT ECOLOGY & PHYTOGEOGRAPHY CBPOT502A (20-21) R20BOTAS02 NURSERY CULTIVATIONS R20BOTCS02 (2023-24)	DSPTS02 (20-21) PYTHON PROGRAMMING R20PDS02 (2022-23)	COMMUNICATION PROTOCOL & TECHNOLOGIES IOTPTS01 (20-21) IoT SENSORS AND COMMUNICATIONS R20IOTAS02 (2022-23)	PHP ITPS02 (21-22)	WSPS02 (21-22) PHP R20WS02 (2022-23)	CBCAS02 COST ACCOUNTING CBCAS02A (20-21)	CBCAS02 COST ACCOUNTING CBCAS02A (20-21)	COST ACCOUNTING CBCAS02A (20-21) COST CONTROL TECHNIQUES R20COMCS02 (2022-23)	CBCAS02 COST ACCOUNTING CBCAS02A (20-21)	COST ACCOUNTING CBCAS02A (20-21) PERFORMANCE MANAGEMENT R20BBA502 (2022-23)	WEB APPLICATION DEVELOPMENT CBBCAS02 (17-18) DIGITAL IMAGING R20BCAS02 (2022-23)	
29-12-2023	02:00 PM to 05:00 PM	ELECTRICITY, ELECTROMAGNETISM & ELECTRO MAGNETIC WAVES CBPHYS01A (20-21)	ELECTRICITY, ELECTROMAGNETISM & ELECTRO MAGNETIC WAVES CBPHYS01A (20-21) APPLICATION OF ELECTRICITY AND ELECTRONICS R20PHYS01 (2022-23)	CBEL501 MICROPROCESSOR 8085 & 8086 CBEL501A (20-21)	APPLIED STATISTICS - I CBSTIS01A (20-21) OPERATIONS RESEARCH - I R20STATAS01 (2022-23)	***	ANIMAL BIOTECHNOLOGY CBZ0501A (20-21) SUSTAINABLE AQUACULTURE MANAGEMENT R20Z00AS01 (2022-23)	APPLIED STATISTICS - I DSAS01 (20-21) OPERATIONS RESEARCH - I R20STATAS01 (2022-23)	TRANSDUCERS AND SENSING SYSTEMS IOTTS02 (20-21) EMBEDDED SYSTEMS DESIGN WITH STM 32 R20IOTELAS01 (2022-23)	DATABASE MANAGEMENT SYSTEM ITDBMS03 (21-22)	WDBMS03 (21-22) DATABASE MANAGEMENT SYSTEM R20DBMS03 (2022-23)	OFFICE MANAGEMENT CBOPM503 (17-18)	OFFICE MANAGEMENT CBOPM503 (17-18)	OFFICE MANAGEMENT CBOPM503 (17-18) ADVERTISING AND MEDIA PLANNING R20COMCS03 (2022-23)	OFFICE MANAGEMENT CBOPM503 (17-18)	OFFICE MANAGEMENT CBOPM503 (17-18) E-BUSINESS R20BBA503 (2022-23)	CYBER SECURITY AND MALWARE ANALYSIS R20BCAS03 (2022-23)	
30-12-2023	02:00 PM to 05:00 PM	MODERN PHYSICS CBPHYS02A (20-21)	MODERN PHYSICS CBPHYS02A (20-21) ELECTRIC INSTRUMENTATION R20PHYS02 (2022-23)	CBEL502 ANALOG & DIGITAL COMMUNICATIONS CBEL502A (20-21)	OPERATIONS RESEARCH CBSTIS02A (20-21) OPERATIONS RESEARCH - II R20STATAS02 (2022-23)	***	ANIMAL HUSBANDRY CBZ0502 (17-18) POST HARVEST TECHNOLOGY OF FISH AND FISHERIES R20Z00AS02 (2022-23)	OPERATING SYSTEM DSOS02 (20-21) OPERATIONS RESEARCH - II R20STATAS02 (2022-23)	SMART SOLUTIONS IOTSS03 (20-21) INTRODUCTION TO ARDUINO PROGRAMMING R20IOTELAS02 (2022-23)	PROGRAMMING WITH R ITPR04 (21-22)	WPR04 (21-22) R20PR04 (2022-23)	INDIRECT TAXES CBIDTS04 (17-18)	INDIRECT TAXES CBIDTS04 (17-18)	IMPORT TAXES CBIDTS04 (17-18) SALES PROMOTION AND PRACTICE R20COMCS04 (2022-23)	INTERNATIONAL TRADE CBITRS04 (17-18)	E-COMMERCE CBEC04 (17-18) SALES PROMOTION AND PRACTICE R20BBA503 (2022-23)	OPERATING SYSTEM CBOS03 (17-18) SELENIUM R20BCAS04 (2022-23)	
01-01-2024	02:00 PM to 05:00 PM	***	DATABASE MANAGEMENT SYSTEM CBDCS01 (17-18) WEB INTERFACE DESIGNING TECHNOLOGIES R20CBCAS01 (2022-23)	DATABASE MANAGEMENT SYSTEM CBDCS01 (17-18)	DATABASE MANAGEMENT SYSTEM CBDCS01 (17-18)	DATABASE MANAGEMENT SYSTEM CBDCS01 (17-18)	SYNTHETIC ORGANIC CHEMISTRY R20CHEAS01 (2022-23)	NUMERICAL ANALYSIS DSNA01 (20-21) MACHINE LEARNING R20DBCS01 (2022-23)	ARM MICROCONTROLLER & EMBEDDED SYSTEMS IOTMAS04 (20-21) MACHINE LEARNING R20IOTCS01 (2022-23)	***	***	CORPORATE ACCOUNTING & ACCOUNTING SERVICE ORGANISATIONS CBCAAS05 (17-18)	CORPORATE ACCOUNTING & ACCOUNTING SERVICE ORGANISATIONS CBCAAS05 (17-18)	CORPORATE ACCOUNTING & ACCOUNTING SERVICE ORGANISATIONS CBCAAS05 (17-18) MOBILE APPLICATION DEVELOPMENT R20BCOMP01 (2022-23)	CORPORATE ACCOUNTING - I CBCRAS05 (17-18)	INTERNATIONAL BUSINESS CBIBS05 (20-21) FOREIGN EXCHANGE MANAGEMENT R20BBA505 (2022-23)	COMPUTER ORGANISATION CBORG05 (17-18) MOBILE APPLICATION DEVELOPMENT R20BCAS05 (2022-23)	
02-01-2024	02:00 PM to 05:00 PM	***	SOFTWARE ENGINEERING CBSCS02 (17-18) WEB APPLICATIONS DEVELOPMENT USING PHP & MYSQL R20SCAS02 (2022-23)	SOFTWARE ENGINEERING CBSCS02 (17-18)	SOFTWARE ENGINEERING CBSCS02 (17-18)	SOFTWARE ENGINEERING CBSCS02 (17-18)	ANALYSIS OF ORGANIC COMPOUNDS R20CHEAS02 (2022-23)	HTML & ANGULAR JS DSHAJS01 (20-21) PHP R20DBCS02 (2022-23)	HTML & ANGULAR JS IOTHAJS01 (20-21) PHP R20IOTCS02 (2022-23)	***	***	CBAAS06 ACCOUNTING & AUDITING STANDARDS CBAS06A (20-21)	CBAS06 CUSTOMS ACT CBAS06A (20-21)	DATABASE MANAGEMENT SYSTEM CBDCMP01 (17-18) CYBER SECURITY AND MALWARE ANALYSIS R20BCOMP02 (2022-23)	PRODUCTION MANAGEMENT - I CBPM506 (17-18)	TALENT MANAGEMENT CBTMS06 (17-18) E-PAYMENT SYSTEM R20BBA506 (2022-23)	SOFTWARE TESTING CBTAS06 (17-18) FULL STACK DEVELOPMENT USING JAVA R20BCAS06 (2022-23)	
03-01-2024	02:00 PM to 05:00 PM	INORGANIC, ORGANIC & PHYSICAL CHEMISTRY CBCHES01A (20-21)	***	***	***	INORGANIC, ORGANIC & PHYSICAL CHEMISTRY CBCHES01A (20-21)	INORGANIC, ORGANIC & PHYSICAL CHEMISTRY CBCHES01A (20-21)	***	***	***	***	ACCOUNTING FOR GOVERNMENT ENTITIES CBAGE507 (17-18)	CORPORATE TAXATION CBCTR507 (17-18)	INTRODUCTION TO TALLY ERP9 CBCCMP502 (17-18)	SUPPLY CHAIN MANAGEMENT CBSCMS07 (17-18)	INDUSTRIAL RELATIONS CBIR507 (17-18)	***	
04-01-2024	02:00 PM to 05:00 PM	INORGANIC, PHYSICAL & ORGANIC CHEMISTRY CBCHES02A (20-21)	***	***	***	INORGANIC, PHYSICAL & ORGANIC CHEMISTRY CBCHES02A (20-21)	INORGANIC, PHYSICAL & ORGANIC CHEMISTRY CBCHES02A (20-21)	***	***	***	***	***	***	PRINCIPLES OF SOFTWARE ENGINEERING CBSCMP503 (17-18)	***	***	***	

Controller of Examinations

PRINCIPAL

22/12/23

Regd No: _____

Room No: ① _____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Sc. (MPC, MPCS)
Subject : Physics
Title of Paper: Applications of Electricity & Electronics
Paper Code : R20PHYC501
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2 pm - 5 pm
Date : 29-12-2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain the colour coding of resistors.
2. What are the applications of capacitors?
3. Explain the series connection of batteries.
4. Give the differences between AC and DC sources.
5. What are the applications of motors?
6. Describe the Step-up transformer and Step-down transformer.
7. Design the Step-up Transformer.
8. Design the LCR series circuit.
9. Describe the power and voltage equation of a DC motor.

SECTION -B

II. Answer ALL the following Questions

5X10=50M

10. Derive the equation for the EMF induced in the inductor.

(OR)

11. Derive the equation for the Energy stored in the capacitor.

12. What is SMPS and Explain the working of the SMPS.

(OR)

13. Explain the Constant voltage source and the Constant current source.

14. Explain the principle and working of Generator.

(OR)

15. Explain the working of Single-phase induction motor.

16. Design the SMPS and explain the design of SMPS.

(OR)

17. Design the step up and Step-down transformer and explain it.

18. Explain the DC motors and explain the construction and voltage equations of DC motor.

(OR)

19. Explain the DC generators.

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)**V – SEMESTER END EXAMINATIONS**

Class : III B.Sc(MPC,MPCS)

Max Marks : 75

Subject : Physics

Pass Mark : 30

Title of Paper : Electricity, Electromagnetism & Electro Magnetic Waves

Duration : 3Hrs

Paper Code : CBPHY501A

Time : 2 pm - 5 pm

W.E.F : 2020-21

Date : 29-12-2023

SECTION-A**5X10=50M****II. Answer ALL the following Questions**

1. State and prove Gauss theorem in electrostatics. Derive an expression for the electric field due to uniformly charged sphere.
(OR)
2. Define D,P, and E and deduce relation between them. Hence derive the relationship between dielectric constant and susceptibility.
3. State and explain Biot and savarts law. Derive an expression for magnetic induction at a point due to an infinite straight conductor carrying current.
(OR)
4. State and explain Biot and savarts law. Derive an expression for magnetic induction at a point due to a long solenoid.
5. Define self-inductance. Calculate the self-inductance due to a long solenoid.
(OR)
6. Define mutual inductance and derive an expression for coefficient of mutual inductance between two coils.
7. Discuss the nature of growth and decay of charge in a capacitance – resistance circuit.
(OR)
8. Give the theory of LCR parallel AC resonant circuit and obtain an expression for the resonant frequency.
9. Write Maxwell's equation in differential form. Derive an equation of electromagnetic waves.
(OR)
10. What is Pointing vector? What is its significance?

SECTION-B**3X5=15M****II. Answer any Three of the Questions.**

11. Explain polarization and polarizability.
12. State and prove the boundary conditions at the dielectric surface.
13. Write a short note on Hall Effect.
14. State and explain Lenz's law.
15. Write a short note on Q-factor?
16. Derive Maxwell's wave equation.

SECTION-C

III. Answer any Two of the Questions.

2X5=10M

17. Calculate the energy stored in the magnetic field of a solenoid of inductance 5 milli Henry, when a maximum current of 3 amp flows through it.
18. Calculate the resonant frequency of LCR series circuit, Given that $L=100\text{mH}$, $C=0.01\text{ }\mu\text{F}$, $R=100\Omega$.
19. Calculate the magnetic induction at a point 10cm away from a straight conductor of carrying current of 10mA.
20. Calculate the potential at point due to charged spherical shell of radius 10cm and carrying charge $78e$.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

V – SEMESTER END EXAMINATIONS

Class : III B.Sc (MPC & MPCS)
Subject : Physics
Title of Paper : Electronic Instrumentation
Paper Code : R20PHYC502
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hr
Time : 2pm – 5pm
Date : 30-12-2023

SECTION-A

I. Answer ALL the following Questions

5X10=50M

1. What is DC voltmeter and explain working principal with a neat diagram.
(OR)
2. What is an Multi meter? Explain Analog and Digital Multi meter with neat diagram?
3. What is cathode ray oscilloscope ? Explain block diagram of CRO with neat diagram.
(OR)
4. What is cathode ray oscilloscope and explain types of CRO .
5. Explain Resistive and Capacitive type touch screen transducers used in mobiles .
(OR)
6. What is the LVDT and Explain with diagram?
7. What is Liquid Crystal Display ? Explain principal and working of 4 x 16 display .
(OR)
8. What is the seven-segment display and Explain types of SSDs.
9. What is Ultrasound scanning ? Explain operating principal and use of Ultrasound scanning .
(OR)
10. What is ECG machine ? Explain operating principal and use of ECG machine.

SECTION-B

II. Answer any FIVE of the following Questions

5X5=25M

11. Write brief note on Function generator .
12. Write brief note on Digital multi meter .
13. Explain about Vertical deflection system.
14. Explain about Digital storage oscilloscope .
15. Explain in detail about piezoelectric transducer?
16. Write brief note on LED displays.
17. Explain in detail about Stethoscope.
18. Explain about Fiber optic sensors .

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

V - SEMESTER END EXAMINATIONS

Class : III B.Sc (MPC & MPCS)
Subject : Physics
Title of Paper : Electronic Instrumentation
Paper Code : R20PHYC502
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hr
Time : 2pm - 5pm
Date : 30-12-2023

SECTION-A

I. Answer ALL the following Questions

5X10=50M

1. What is DC voltmeter and explain working principal with a neat diagram.
(OR)
2. What is an Multi meter? Explain Analog and Digital Multi meter with neat diagram?
3. What is cathode ray oscilloscope ? Explain block diagram of CRO with neat diagram.
(OR)
4. What is cathode ray oscilloscope and explain types of CRO .
5. Explain Resistive and Capacitive type touch screen transducers used in mobiles .
(OR)
6. What is the LVDT and Explain with diagram?
7. What is Liquid Crystal Display ? Explain principal and working of 4 x 16 display .
(OR)
8. What is the seven-segment display and Explain types of SSDs.
9. What is Ultrasound scanning ? Explain operating principal and use of Ultrasound scanning .
(OR)
10. What is ECG machine ? Explain operating principal and use of ECG machine.

SECTION-B

II. Answer any FIVE of the following Questions

5X5=25M

11. Write brief note on Function generator .
12. Write brief note on Digital multi meter .
13. Explain about Vertical deflection system.
14. Explain about Digital storage oscilloscope .
15. Explain in detail about piezoelectric transducer?
16. Write brief note on LED displays.
17. Explain in detail about Stethoscope.
18. Explain about Fiber optic sensors .

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Sc (MPC, MPCS)
Subject : PHYSICS
Title of Paper: MODERN PHYSICS
Paper Code : CBPHY502A
W.E.F : 2020-21

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2pm - 5pm
Date : 30-12-2023

SECTION - A

Answer ALL the following Questions

5X10=50M

1. Describe Stern- Gerlach experiment with neat diagram and necessary theory.
(OR)
2. What is Raman Effect. Describe an experimental arrangement for the study of Raman Effect.
3. What are Matter waves? Explain de Broglie's hypothesis for matter waves.
Derive expression for wavelength of matter waves
(OR)
4. Explain Heisenberg's uncertainty principle for position and momentum and extend it for Energy and time
5. Write the physical interpretation of wave function. Derive Schrodinger time dependent wave equation.
(OR)
6. Derive Schrodinger wave equation to particle in one dimensional infinite box.
7. What are magic numbers? How these are explained in shell model?
(OR)
8. Explain Gamow's theory of α - decay.
9. Describe Laue's method to determine the crystal structure.
(OR)
10. What is Meissner effect? Write about Type I and Type II super conductors.

SECTION -B

Answer any THREE Of the following questions.

3X5=15M

11. Explain Normal Zeeman effect and Anomalous Zeeman Effect.
12. What are the applications of Raman Effect?
13. What are the properties of matter waves?
14. What are Basic Postulates of quantum mechanics.
15. What are the limitations of liquid drop model?
16. Explain Geiger-Nuttal Law.

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SECTION -C

Answer any TWO Of the following questions.

2X5=10M

17. The exciting line in an experiment is 5460 \AA and the stokes line is at 5520 \AA .
Find the wave length of anti- stokes line?
18. What voltage must be applied to an electron microscope to produce electrons of wavelength 0.40 \AA .
19. The Spacing between the principal planes of NaCl crystal is 2.82 \AA . It is found that the first order Bragg reflection occur at an angle of 10° . What is the wavelength of X- ray?
20. If the uncertainty in position of an electron is $4 \times 10^{-10} \text{ m}$, calculate the uncertainty in its momentum.

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Regd No. 8**KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)****V - SEMESTER END EXAMINATIONS**

Class : III B.Sc(MPC,MPCS,MECS,MSCS&MCCS)

Max Marks : 75

Subject : Mathematics

Pass Mark : 30

Title of Paper : Numerical Methods

Duration : 3Hrs

Paper Code : R20MATA501

Time : 2pm - 5pm

W.E.F : 2022-23

Date : 27-12-2023

SECTION-A**I. Answer any FIVE of the following Questions****5X5=25M**

1. Show that

i) $\Delta - \nabla = \delta^2$ ii) $\mu^2 = 1 + \frac{\delta^2}{4}$ iii) $\Delta = E - 1$

2. Find the missing term in the following data.

x	0	1	2	3	4
y	1	3	9	-	81

3. If $\mu_0=1, \mu_1=0, \mu_2=5, \mu_3=22, \mu_4=57$ find $\mu_{0.5}$.4. Find $f(25)$ using the following table

x	20	24	28	32
f(x)	24	32	35	40

5. Find $\frac{dy}{dx}$ and $\frac{d^2y}{dx^2}$ at $x = 0.4$ from the data

x	0.1	0.2	0.3	0.4
y	1.10517	1.22140	1.34986	1.49182

6. State and prove Trapezoidal Rule.

7. Evaluate $\int_0^6 \frac{1}{1+x^2} dx$ by using Simpsons 1/3rd Rule.8. Solve the differential equations $\frac{dy}{dx} = x + y$ with $y(0) = 1, x \in [0, 1]$ by Taylor's series expansion to obtain y for $x = 0.1$.**SECTION-B****II. Answer ALL the following Questions****5X10=50M**

9. Show that

i) $\delta = E^{1/2} - E^{-1/2}$ ii) $\mu = \frac{1}{2}[E^{\frac{1}{2}} + E^{-\frac{1}{2}}]$ iii) $1 + \mu^2 \delta^2 = [1 + \frac{1}{2} \delta^2]^2$

(OR)

10. State and prove Newton-Gregory formula for forward interpolation with equal intervals.

[P.T.O]

11. Using Lagrange's interpolation formula find y at $x = 301$.

x	300	304	305	307
y	2.4771	2.4829	2.4843	2.4871

(OR)

12. Apply Newton divided difference formula to find the value of $f(8)$ if

$$f(1) = 3, f(3) = 31, f(6) = 223, f(10) = 1011, f(11) = 1343.$$

13. Find $f'(1.5)$ and $f''(1.5)$ from the following table

x	1.5	2.0	2.5	3.0	3.5	4.0
$f(x)$	3.375	7.000	13.625	24.000	38.875	59.000

(OR)

14. By using the derivative of Stirling's formula to find $\frac{dy}{dx}$ & $\frac{d^2y}{dx^2}$ at $x = 1.6$ from the data

x	1.0	1.2	1.4	1.6	1.8	2.0	2.2
y	2.7183	3.3201	4.0552	4.9530	6.0496	7.3891	9.0250

15. Evaluate $\int_1^{7\frac{1}{x}} dx$ by using

a) Simpson's $\frac{1}{3}$ rule

b) Simpson's $\frac{3}{8}$ rule

(OR)

16. Evaluate $\int_4^{5.2} \log x \, dx$ by using Weddle's rule.

17. Given $\frac{dy}{dx} = y - x$ with $y(0) = 2$ find $y(0.1)$ and $y(0.2)$ correct to 4 decimal places by using Runge Kutta method.

(OR)

18. Determine the value of y when $x = 0.1$ given that $y(0) = 1$ and $y' = x^2 + y$ by using modified Euler's method.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class	: III B.Sc. (MPC, MPCS, MECS, MSCS, MCCS)	Max Marks	: 75
Subject	: Mathematics	Pass Mark	: 30
Title of Paper	: Ring Theory & Vector Calculus	Duration	: 3 Hrs
Paper Code	: CBMAT501A	Paper Time	: 2pm to 5pm
W.E.F	: 2020-21	Date	: 27/12/2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Prove that every field is an integral domain.
2. Prove that the intersection of two subrings of a ring R is a subring of R .
3. If f is a homomorphism of a ring R into a ring R' then prove that f is isomorphism iff $\ker f = \{0\}$.
4. An ideal $U \neq R$ of a commutative ring R is a prime ideal iff R/U is an integral domain.
5. Find the directional derivative of $f = xy + yz + zx$ in the direction of the vector $\vec{i} + 2\vec{j} + 2\vec{k}$ at the point $(1, 2, 0)$.
6. If $\vec{F} = \text{grad}(x^3 + y^3 + z^3 - 3xyz)$ then find $\text{div} \vec{F}$ and $\text{curl} \vec{F}$.
7. If $\vec{F} = (3x^2 + 6y)\vec{i} - 14yz\vec{j} + 20xz^2\vec{k}$, evaluate $\int \vec{F} \cdot d\vec{r}$ along the line joining $(0,0,0)$ to $(1,0,0)$ to $(1,1,0)$ to $(1,1,1)$.
8. Apply Gauss's theorem to prove that $\int_S \vec{r} \cdot \vec{N} \, dS = 3V$.

SECTION - B

II. Answer ALL the following Questions

5X10=50M

9. Prove that every finite integral domain is a field.
(OR)
10. Prove that ring of integers Z is a principal ideal ring.
11. State and Prove Fundamental theorem of Homomorphism on rings.
(OR)
12. Prove that an ideal U of a commutative ring R with unity is maximal iff the quotient ring R/U is a field.
13. If \vec{a} is a constant vector, then show that $\text{Curl} \left(\frac{\vec{a} \times \vec{r}}{r^3} \right) = -\frac{\vec{a}}{r^3} + \frac{3\vec{r}}{r^5} (\vec{a} \cdot \vec{r})$.
(OR)
14. Prove that $\text{Curl}(\vec{A} \times \vec{B}) = \vec{A} \text{div} \vec{B} - \vec{B} \text{div} \vec{A} + (\vec{B} \cdot \nabla) \vec{A} - (\vec{A} \cdot \nabla) \vec{B}$.
15. If $\vec{F} = 4xz\vec{i} - y^2\vec{j} + yz\vec{k}$, evaluate $\int_S \vec{F} \cdot \vec{N} \, dS$ where S is the surface of the cube bounded by $x=0, x=a, y=0, y=a, z=0, z=a$.
(OR)
16. If $\vec{F} = 2xz\vec{i} - x\vec{j} + y^2\vec{k}$, evaluate $\int_V \vec{F} \cdot d\vec{V}$, where V is the region bounded by the surfaces $x=0, x=2, y=0, y=6, z=x^2, z=4$.
17. State and Prove Gauss's divergence theorem.
(OR)
18. Apply Stokes's theorem to evaluate $\int_C y \, dx + z \, dy + x \, dz$ where C is curve of intersection of $x^2 + y^2 + z^2 = a^2$ and $x + z = a$.

Regd No: _____

Room No: 11

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class	: III B.Sc. (MPC, MPCs, MECS, MSCS, MCCS)	Max Marks	: 75
Subject	: Mathematics	Pass Mark	: 30
Title of Paper	: Ring Theory & Vector Calculus	Duration	: 3 Hrs
Paper Code	: CBMAT501A	Paper Time	: 2pm to 5pm
W.E.F	: 2020-21	Date	: 27/12/2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Prove that every field is an integral domain.
2. Prove that the intersection of two subrings of a ring R is a subring of R .
3. If f is a homomorphism of a ring R into a ring R' then prove that f is isomorphism iff $\ker f = \{0\}$.
4. An ideal $U \neq R$ of a commutative ring R is a prime ideal iff R/U is an integral domain.
5. Find the directional derivative of $f = xy + yz + zx$ in the direction of the vector $\bar{i} + 2\bar{j} + 2\bar{k}$ at the point $(1, 2, 0)$.
6. If $\bar{F} = \text{grad}(x^3 + y^3 + z^3 - 3xyz)$ then find $\text{div}\bar{F}$ and $\text{curl}\bar{F}$.
7. If $\bar{F} = (3x^2 + 6y)\bar{i} - 14yz\bar{j} + 20xz^2\bar{k}$, evaluate $\int \bar{F} \cdot d\bar{r}$ along the line joining $(0,0,0)$ to $(1,0,0)$ to $(1,1,0)$ to $(1,1,1)$.
8. Apply Gauss's theorem to prove that $\int_S \bar{r} \cdot \bar{N} \, dS = 3V$.

SECTION - B

II. Answer ALL the following Questions

5X10=50M

9. Prove that every finite integral domain is a field.
(OR)
10. Prove that ring of integers Z is a principal ideal ring.
11. State and Prove Fundamental theorem of Homomorphism on rings.
(OR)
12. Prove that an ideal U of a commutative ring R with unity is maximal iff the quotient ring R/U is a field.
13. If \bar{a} is a constant vector, then show that $\text{Curl} \left(\frac{\bar{a} \times \bar{r}}{r^3} \right) = -\frac{\bar{a}}{r^3} + \frac{3\bar{r}}{r^5} (\bar{a} \cdot \bar{r})$.
(OR)
14. Prove that $\text{Curl}(\bar{A} \times \bar{B}) = \bar{A} \text{div}\bar{B} - \bar{B} \text{div}\bar{A} + (\bar{B} \cdot \nabla)\bar{A} - (\bar{A} \cdot \nabla)\bar{B}$.
15. If $\bar{F} = 4xz\bar{i} - y^2\bar{j} + yz\bar{k}$, evaluate $\int_S \bar{F} \cdot \bar{N} \, dS$ where S is the surface of the cube bounded by $x = 0, x = a, y = 0, y = a, z = 0, z = a$.
(OR)
16. If $\bar{F} = 2xz\bar{i} - x\bar{j} + y^2\bar{k}$, evaluate $\int_V \bar{F} \cdot d\bar{V}$, where V is the region bounded by the surfaces $x = 0, x = 2, y = 0, y = 6, z = x^2, z = 4$.
17. State and Prove Gauss's divergence theorem.
(OR)
18. Apply Stoke's theorem to evaluate $\int_C y \, dx + z \, dy + x \, dz$ where C is curve of intersection of $x^2 + y^2 + z^2 = a^2$ and $x + z = a$.

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Room No: 12

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class	: III B.Sc. (MPC,MPCS,MECS,MSCS,MCCS)	Max Marks	: 75
Subject	: Mathematics	Pass Mark	: 30
Title of Paper	: Mathematical Special Functions	Duration	: 3 Hrs
Paper Code	: R20MATA502	Paper Time	: 2 pm - 5 pm
W.E.F	: 2022-23	Date	: 28.12.2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Prove that $\int_0^{\infty} e^{-kx} x^{n-1} dx = \frac{\Gamma(n)}{k^n}$, where $k > 0$.
2. Prove that $(1-x)^2 T_n'(x) = -nxT_n(x) + nT_{n-1}(x)$.
3. Find the values of $L_0(x)$ & $L_1(x)$.
4. Prove that $H_n'(x) = 2nH_{n-1}(x)$.
5. Prove that $H_{2n}(0) = \frac{(-1)^n (2n)!}{n!}$.
6. Show that $P_n(-x) = (-1)^n P_n(x)$.
7. Show that $J_{\frac{1}{2}}(x) = \sqrt{\frac{2}{\pi x}} \sin x$.
8. Prove that $\frac{d}{dx} (x^{-n} J_n(x)) = -x^{-n} J_{n+1}(x)$.

SECTION - B

II. Answer ALL the following Questions

5X10=50M

9. State and prove relation between beta and gamma functions.

(OR)

10. Show that $\gamma\left(-n + \frac{1}{2}\right) = \frac{(-1)^n 2^n \sqrt{\pi}}{1.3.5 \dots (2n-1)}$.

11. Prove that recurrence relation $(n+1)L_{n+1}(x) = (2n+1-x)L_n(x) - nL_{n-1}(x)$.

(OR)

12. State and prove orthogonal property of $L_n(x)$.

13. State and prove generating function of $H_n(x)$.

(OR)

14. Prove that $H_{n+1}(x) = 2xH_n(x) - 2nH_{n-1}(x)$.

15. Show that recurrence relation $xJ_n'(x) = nJ_n(x) - xJ_{n+1}(x)$.

(OR)

16. State and prove generating function of $J_n(x)$.

17. State and prove Rodrigue's formula of $P_n(x)$.

(OR)

18. Show that $nP_n = xP_n' - xP_{n-1}'$.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Sc. (MPCS, MECS, MSCS, MCCS)
Subject : Computers
Title of Paper: Software Engineering
Paper Code : CBCSC502
W.E.F : 2017-18

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2 pm - 5 pm
Date : 02-01-2024

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain about CMMi Levels?
2. Explain briefly about layered technology.
3. Write about 4P's technology.
4. Explain about Defect Removal Efficiency.
5. Explain types of Project risks.
6. What are the characteristics of good design.
7. Write about SQA Activities.
8. Explain various factors that affect Software Quality.

SECTION - B

II. Answer ALL the following Questions

5X10=50M

9. Explain about Spiral Model?

(OR)

10. Explain about RAD Model.

11. Explain different Software Measurement Metrics.

(OR)

12. Explain Software Quality Metrics.

13. Explain COCOMO Model.

(OR)

14. What is Risk? Explain how Risks can be Managed.

15. Write about different Design Principles.

(OR)

16. Discuss Cohesion in detail.

17. What is Software Testing? Explain about Software Testing.

(OR)

18. Explain about SQA Plan.

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Room No: 14

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Sc (MPCS, MECS, MSCS, MCCS)
Subject : COMPUTER SCIENCE
Title of Paper: Database Management System
Paper Code : CBCSC501
W.E.F : 2017-18

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time :
Date :

SECTION - A

Answer any FIVE Of the following questions.

5X5=25M

1. Explain about various keys?
2. Explain about various cardinalities?
3. Explain about constraints with example?
4. What is a DBMS and what are its characteristics?
5. Explain about Normalization?
6. Explain about data abstraction?
7. What are the notations used in E R diagram?
8. Explain about join operators?

SECTION -B

Answer ALL the following Questions

5X10=50M

9. Explain about advantages and disadvantages of DBMS?

(OR)

10. Explain types of data models?

11. Write the list of Codd's rules?

(OR)

12. What is Integrity constraint? Explain its types

13. Explain the features of ER model. Explain types of entities and attributes?

(OR)

14. Explain Generalization and Specialisation?

15. Explain about DDL commands in detail?

(OR)

16. Explain about Normalization with basic normal forms?

17. Explain SQL functions in detail?

(OR)

18. Explain about joins with examples?

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

V - SEMESTER END EXAMINATIONS

Class : III B.Sc (MPCS, MECS, MSCS, MCCS)
Subject : Computer Science
Title of Paper : Web Interface Designing Technologies
Paper Code : R20CSCA501
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Time : 2 pm - 5 pm
Date : 01-01-2024

SECTION-A

I. Answer any FIVE of the following Questions

5X5=25M

1. Explain Structure of HTML.
2. Explain about Pseudo class in CSS.
3. Explain HTML5.
4. Explain Data Object in Java Script.
5. Explain any three mathematical functions.
6. Explain new blog post in Java Script.
7. Explain Admin Panel in Word Press.
8. Explain Parent and Child themes

SECTION-B

II. Answer ALL the following Questions

5X10=50M

9. Explain the tags of HTML.

(OR)

10. Explain about Frames in detail with example programs.

11. Explain HTML Media.

(OR)

12. Explain about CSS.

13. Explain different Operators in Java Script.

(OR)

14. Explain the Exception Handling with examples.

15. Explain features of Word Press.

(OR)

16. Explain working with media in Word Press.

17. Explain the Themes.

(OR)

18. Explain in detail about protecting Word Press website from hackers.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

V - SEMESTER END EXAMINATIONS

Class : III B.Sc (MPCS, MECS, MSCS, MCCS)

Max Marks : 75

Subject : Computer Science

Pass Mark : 30

Title of Paper : Web Applications Development Using PHP & MYSQL

Duration : 3 Hrs

Paper Code : R20CSCA502

Time : 2 pm - 5 pm

W.E.F : 2022-23

Date : 02-01-2024

SECTION-A

I. Answer any FIVE of the following Questions

5X5=25M

1. Explain about different types of variables.
2. How to create user defined functions in PHP.
3. Explain the procedure to send e-mail in PHP with an example.
4. Explain procedure for Adding Watermarks in HTML.
5. Explain the operators in PHP.
6. Explain Connection Establishment in php with MYSQL.
7. Explain the concept of OOPs in PHP.
8. Explain about Functions in PHP

SECTION-B

II. Answer ALL the following Questions

5X10=50M

9. Explain about Passing Variable using URL and Forms in PHP.

(OR)

10. Explain about Passing Variable using SESSION and COOKIES in PHP.

11. Explain about Types of Array with example.

(OR)

12. How can we create Classes and Methods in PHP.

13. Explain control structure in PHP.

(OR)

14. Explain *how can link forms* in PHP with example.

15. Explain the procedure to *create* MySQL database connection with an example.

(OR)

16. How can the user Insert & Delete Relational Database.

17. How to create a table in HTML page with data in MySQL.

(OR)

18. Explain how to add caption and create thumbnails in PHP.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class	: III B.Sc (MPC, MPCS, MECS, MSCS, MCCS)	Max Marks	: 75
Subject	: MATHEMATICS	Pass Mark	: 30
Title of Paper	: Liner Algebra	Duration	: 3 Hrs
Paper Code	: CBMAT502A	Paper Time	: 2pm - 5pm
W.E.F	: 2020-21	Date	: 28.12.2023

SECTION - A

Answer any FIVE Of the following questions.

5X5=25M

1. If W_1 and W_2 are two subspaces of a vector space $V(F)$ then prove that $W_1 \cap W_2$ is also a subspace of $V(F)$.
2. Show that the system of three vectors $(1,3,2)$ $(1,-7,-8)$ $(2,1,-1)$ of $V_3(\mathbb{R})$ is linearly dependent.
3. Show that the set $\{(1,0,0)(1,1,0)(1,1,1)\}$ is a basis of $\mathbb{C}^3(\mathbb{C})$.
4. If T is a linear transformation from $U(F)$ into $V(F)$ then prove that $N(T)$, the null space of T is a subspace of $U(F)$.
5. The mapping $T: V_3(\mathbb{R}) \rightarrow V_2(\mathbb{R})$ is defined by $T(x,y,z) = (x-y, x-z)$. Show that T is a linear transformation.
6. Find the Eigen values of the matrix $\begin{bmatrix} 3 & 1 & 1 \\ 2 & 4 & 2 \\ 1 & 1 & 3 \end{bmatrix}$
7. State and prove parallelogram law.
8. Prove that $S = \left\{ \left(\frac{1}{3}, -\frac{2}{3}, -\frac{2}{3} \right) \left(\frac{2}{3}, -\frac{1}{3}, \frac{2}{3} \right) \left(\frac{2}{3}, \frac{2}{3}, \frac{1}{3} \right) \right\}$ is an orthonormal set in \mathbb{R}^3 with standard inner product.

SECTION -B

Answer ALL the following Questions

5X10=50M

9. Prove that the necessary and sufficient condition for a non empty subset W of a vector space $V(F)$ to be a subspace of V is that $a, b \in F; \alpha, \beta \in W \Rightarrow a\alpha + b\beta \in W$.

(Or)

10. Let $V(F)$ is a vector space. If $\alpha_1, \alpha_2, \alpha_3, \dots, \alpha_n$ are non zero vectors of V then $S = \{ \alpha_1, \alpha_2, \alpha_3, \dots, \alpha_n \}$ is linearly dependent iff some $\alpha_k, 2 \leq k \leq n$ is a linear combination of its preceding vectors.

|| State and prove Basis extension theorem.

(Or)

12. If W is a subspace of Finite dimensional vector space then prove that

$$\dim\left(\frac{V}{W}\right) = \dim V - \dim W$$

13 State and prove Rank-Nullity theorem.

(Or)

14 If $T: V_4(\mathbb{R}) \rightarrow V_3(\mathbb{R})$ is a linear transformation defined by $T(a, b, c, d) = (a - b + c + d, a + 2c - d, a + b + 3c - 3d)$ for $a, b, c, d \in \mathbb{R}$ then verify $\text{rank}(T) + \text{nullity}(T) = \dim V_4(\mathbb{R})$.

15 State and prove Cayley-Hamilton theorem.

(Or)

16 Find Characteristics roots and the corresponding characteristics vectors of the

$$\text{matrix } A = \begin{bmatrix} 6 & -2 & 2 \\ -2 & 3 & -1 \\ 2 & -1 & 3 \end{bmatrix}.$$

17 Apply Gram-Schmidt process to the vectors $\{(2,1,3), (1,2,3), (1,1,1)\}$ to obtain an Orthonormal basis for $V_3(\mathbb{R})$ with the standard inner product.

(Or)

18 State and prove Cauchy-Schwartz's inequality.

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Room No: 19

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Sc.(MSCS,DS)
Subject : Statistics
Title of Paper: Operations Research-I
Paper Code : R20STAT501/R20DSSTAT501
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2pm - 5pm
Date : 29-12-2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. What are the various types of models in OR?
2. State applications of OR.
3. Explain matrix form of LPP.
4. Explain the canonical form of LPP.
5. Explain the degeneracy in LPP.
6. State the fundamental theorem of duality.
7. Write the difference between Primal and dual.
8. Define post optimum analysis.

SECTION - B

II. Answer ALL the following Questions

5X10=50M

9. Define OR, Aim and scope of OR.

(OR)

10. Solve the following LPP using graphical method

$$\text{Minimize } Z = 20X_1 + 10X_2$$

Subject to

$$X_1 + 2X_2 \leq 40$$

$$3X_1 + X_2 \geq 30$$

$$4X_1 + 3X_2 \geq 60$$

$$X_1, X_2 \geq 0.$$

11. Write the procedure of simplex method.

(OR)

12. Solve the following LPP using simplex method

$$\text{Max } Z = 7X_1 + 5X_2$$

Subject to

$$X_1 + 2X_2 \leq 6$$

$$4X_1 + 3X_2 \leq 12$$

$$X_1, X_2 \geq 0$$

13. Write the procedure of two-phase simplex method.

(OR)

(P.T.O)

14. Solve the following LPP by using Big M method.

$$\text{Minimize } Z = 5X_1 + 3X_2$$

Subject to

$$2X_1 + 4X_2 \leq 12$$

$$2X_1 + 2X_2 = 10$$

$$5X_1 + 2X_2 \geq 10$$

$$X_1, X_2 \geq 0$$

15. Show that following LPP by using dual simplex method.

$$\text{Min } Z = -3X_1 - 2X_2$$

Subject to

$$X_1 + X_2 \geq 1$$

$$X_1 + X_2 \leq 7$$

$$X_1 + 2X_2 \geq 10$$

$$X_2 \leq 3$$

$$X_1, X_2, X_3 \geq 0$$

(OR)

16. Show that dual of dual is primal.

17. Explain the structural changes due to addition of a new variable.

(OR)

18. Given the LPP.

$$\text{Max } Z = 3X_1 + 5X_2$$

Subject to

$$3X_1 + 2X_2 \leq 18$$

$$X_1 \leq 4, \quad X_2 \leq 6$$

$$X_1, X_2 \geq 0$$

Determine an optimal solution to the LP problem and discuss the change in C_j on the optimality of the optimal basic feasible solution

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Room No: 21

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Sc.(MSCS,DS)
 Subject : Statistics
 Title of Paper : Operations Research-II
 Paper Code : R20STATA502/R20DSSTATA502
 W.E.F : 2022-23

Max Marks : 75
 Pass Mark : 30
 Duration : 3 Hrs
 Paper Time : 2pm - 5pm
 Date : 30-12-2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain the North-West rules and problems.
2. Define degeneracy solution in transportation problem.
3. Define an assignment problem.
4. Explain travelling sales man problem.
5. Define sequencing problem.
6. Explain the procedure of n-jobs and 3 machines.
7. Define float. Write the types of float.
8. What is strategy? Explain the types of strategies.

SECTION -B

II. Answer ALL the following Questions

5X10=50M

9. Explain the procedure of MODI method.

(OR)

10. Solve the following transportation problem for minimum cost:

Destinations	Origins				Requirements
	A	B	C	D	
1	7	4	3	4	15
2	3	2	7	5	25
3	4	4	3	7	20
4	9	7	5	3	40
Availabilities	12	8	35	25	

11. Explain the procedure of Hungarian method.

(OR)

12. Solve the following assignment problem. Cell values represent cost of assignment job A, B, C and D to the machines I, II, III and IV

	Machines			
	I	II	III	IV
A	10	12	19	11
B	5	10	7	8
C	12	14	13	11
D	8	15	11	9

(P.T.O)

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13. Explain the procedure of n-jobs and 2- machine.

(OR)

14. There are 5 jobs, each of which has to go through the machines A and B in the order AB. The processing time (in hours) are given as

Job	:	J_1	J_2	J_3	J_4	J_5
Machine A	:	2	4	5	7	1
Machine B	:	3	6	1	4	8

Determine a sequence of these jobs that will minimise the total elapsed time T.

Also obtain (i) the minimum elapsed time; and

(ii) the idle time for each of machine

15. Given the following information.

Activity	1-2	1-3	1-4	2-5	3-6	3-7	4-7	5-8	6-8	7-9	8-9
Time estimate (Weeks)	5	6	3	5	7	10	4	2	5	6	4

(i) Draw the network diagram

(ii) Determine the critical path for the above project

(OR)

16. The following information is given

Activity (i-j)	1-2	1-3	1-4	2-5	3-5	4-6	5-6
Optimistic time (weeks)	1	1	2	1	2	2	3
Most Likely time (weeks)	1	4	2	1	5	5	6
Pessimistic time (weeks)	7	7	8	1	14	8	15

(i) Draw a project network

(ii) Find the expected duration and variance of each activity. What is the expected project length?

(iii) Calculate the variance and standard deviation of project length. What is the probability that the project will be completed: *in 21 days for duration of 17 days*

17. Find the solution of game theory problem using dominance method.

PLAYERS	B1	B2	B3	B4
A1	3	5	4	2
A2	5	6	2	4
A3	2	1	4	0
A4	3	3	5	2

(OR)

18. Solve the following game graphically.

	Player B			
Player A	2	1	0	-2
	1	0	3	2

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Sc. (MSCS, DS)
 Subject : Statistics
 Title of Paper: Applied Statistics -I
 Paper Code : CBSTT501A/DSAS501
 W.E.F : 2020-21

Max Marks : 75
 Pass Mark : 30
 Duration : 3 Hrs
 Paper Time : 2pm - 5pm
 Date : 29-12-2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain sampling errors.
2. Explain limitations of sampling.
3. Explain sample mean is an unbiased estimator of population mean.
4. Explain Neymann and proportional allocation.
5. Explain systematic sampling.
6. Explain fixed and random effect model.
7. Explain Local control.
8. Explain merits and demerits of RBD.

SECTION - B

II. Answer ALL the following Questions

5X10=50M

9. Explain principle steps in a sample survey.
 (OR)
10. Explain advantages of sampling over census method.
11. In SRSWOR prove that $V(\bar{y}) = \frac{N-n}{Nn} S^2$.
 (OR)
12. Explain the comparison of SRSWOR and SRSWR.
13. Prove that $V(\bar{y}_{st}) = \frac{N-n}{Nn} \sum p_i S_i^2$.
 (OR)
14. If the population consists of a linear trend then prove that $V(\bar{y}_{st}) \leq V(\bar{y}_{sys}) \leq V(\bar{y}_R)$.
15. Explain ANOVA two way classification.
 (OR)
16. Three processes A, B and C are tested to see whether their outputs are equilant.
 The following observations of output are made. $F_{(2,16)} = 3.63$ at 5% L.O.S.

A	10	12	13	11	10	14	15	13
B	9	11	10	12	13			
C	11	10	15	14	12	13		

(P.T.O)

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17. Explain one missing observation in RBD.

(OR)

18. The table below gives the yield of rice in kilos observed in a field experiment carried out in 4 X 4 Latin square. $F_{(3,6)} = 4.76$ at 5% L.O.S.

A	C	B	D
12	19	10	8
C	B	D	A
18	12	6	7
B	D	A	C
22	10	5	21
D	A	C	B
12	7	27	17

Analyze the design using LSD.

Room No: _____

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(25)

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

V - SEMESTER END EXAMINATIONS

Class : III B.Sc (CBZ)
Subject : BOTANY
Title of Paper : PLANT TISSUE CULTURE
Paper Code : R20BOTC501
W.E.F : 2023-24

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Time : 2pm - 5pm
Date : 27-12-2023

SECTION-A

Answer any THREE of the following

3 X 5 = 15M

1. Advantages of Tissue culture
2. Fumigation
3. Leaf Culture
4. Virus indexing
5. Bioreactor

SECTION-B

Answer ALL of the following

5 X 2 = 10M

6. Redifferentiation
7. Auxins
8. Incubation
9. Westron bolt
10. Bt-cotton

SECTION-C

Answer ALL of the following

5 X 10 = 50M

11. Write the history of Plant tissue culture
(OR)
12. Explain scope and significance of Tissue culture
13. Explain the composition of different culture medium
(OR)
14. Write an essay on U V Sterilization and Autoclave
15. What is Callus Culture? Write various steps.
(OR)
16. Write about the chemicals used in surface sterilization of explants.
17. Explain the role of plant growth regulators in Tissue culture
(OR)
18. What is Organogenesis? Write its types and factors.
19. Write the methods used for Gene transfer
(OR)
20. What are secondary metabolites and give their classification

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

V - SEMESTER END EXAMINATIONS

Class : III B.Sc (CBZ)

Max Marks : 75

Subject : BOTANY

Pass Mark : 30

Title of Paper : MUSHROOM CULTIVATION

Duration : 3 Hrs

Paper Code : R20BOTC502

Time : 2 pm - 5 pm

W.E.F : 2023-24

Date : 28-12-2023

SECTION-A

Answer ^{the All} of the following

5 X 2 = 10M

1. Stipe
2. Bulk Chamber
3. Surface spawning
4. Contamination
5. Bioremediation

SECTION-B

Answer ^{any Three} of the following

3 X 5 = 15M

6. Edible Mushroom
7. Posteurization tunnels
8. Storage of Spawn
9. Major diseases of Mushroom
10. Mushroom cutlet

SECTION-C

Answer **ALL** of the following

5 X 10 = 50M

11. Define Mushroom. Write structure of mushroom
(OR)
12. Write an essay on Nutraceutical and medicinal value of mushroom
13. Write an essay on layout of Mushroom farm
(OR)
14. Write an essay methods in compost preparation
15. Give an account of facilities required for spawn preparation
(OR)
16. Explain the benefits, types and other material of casting.
17. Write an essay on cultivation of Milky mushroom
(OR)
18. Write an essay on the production of Button mushroom
19. Explain the quality assurance and entrepreneurships in mushroom cultivation.
(OR)
20. Explain how mushroom are preserved through drying method.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III.B.Sc(CBZ)
Subject : Zoology
Title of Paper: Sustainable Aquaculture Management
Paper Code : R20ZOOA501
W.E.F : 2021-22

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2 pm - 5 pm
Date : 29-12-2023

SECTION - A

I. Answer ALL the following questions.

5X2=10M

1. Intensive culture of fish.
2. BOD.
3. Liming and Fertilization.
4. Mixed culture of prawn.
5. Fungal Diseases in shell fish.

SECTION - B

II. Answer any FIVE Of the following questions.

3X5=15M

6. Present status of National Scenario aquaculture.
7. Nursery ponds.
8. Oxygen depletion problems in culture ponds.
9. Post stocking management of fish culture ponds.
10. Culture of L.Vannamei culture practices.
11. Bacterial diseases of fish and prawn.
12. Brackish water cultivable species.
13. Control of predators, weeds, algal blooms.

SECTION - C

III. Answer ^{Five of} the following Questions

5X10=50M

14. What are the Fresh water major cultivable species of fisheries? Describe them?
15. Give an account of design and construction of fish farm & Shrimp Farm.
16. Explain about the water quality characteristics suitable for culture.
17. Write an essay on induced breeding of carp by hypophysation techniques.
18. Explain commercial importance of prawn.
19. Explain about the viral diseases of fin fish and shell fish.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V – SEMESTER END EXAMINATIONS

Class : III B.Sc (CBZ)

Max Marks : 75

Subject : Zoology

Pass Mark : 30

Title of Paper : Post Harvest Technology of Fish And Fisheries

Duration : 3 Hrs

Paper Code : R20ZOOA502

Time : 2 pm - 5 pm

W.E.F : 2021-22

Date : 30-12-2023

SECTION-A

I. Answer ALL the following Questions

5X2=10M

1. Spoilage
2. Smoking
3. Chowder
4. Sanitation
5. HACCP

SECTION-B

II. Answer any FIVE of the following Questions

5X5=25M

6. Handling of fresh fish
7. Post mortem fishes
8. Chilling
9. Fish glue
10. Fish oil
11. Personal hygiene in processing plants
12. Codex alimentarius
13. Environmental hygiene in processing plants

SECTION-C

III. Answer any FOUR of the following Questions

4X10=40M

Draw a labelled diagram wherever necessary

14. Give account of transport of fresh fish
15. Give account of traditional methods of fish preservation
16. Write an essay on fish by products
17. Explain about personal hygiene in processing plant
18. Mention about seafood quality assurance and certification system
19. Write an essay on environmental hygiene in processing plant

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V – SEMESTER END EXAMINATIONS

Class : III B.Sc (CBZ)
Subject : Chemistry
Title of Paper : Synthetic Organic Chemistry
Paper Code : R20CHEA501
W.E.F : 2021-22

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Time : 2 pm - 5 pm
Date : 01-01-2024

SECTION-A

I. Answer any FIVE of the following Questions

5X2=10M

1. What are sigmatropic rearrangements?
2. Define electrocyclic reactions with examples.
3. Write the structures of paracetamol and aspirin
4. Write the guidelines for disconnection
5. What is Negishi coupling?
6. Define stille coupling
7. Write any two reducing reagents used for the reduction of carbonyl compounds to alcohols.
8. Give the structures of PCC and PDC

SECTION-B

II. Answer any FIVE of the following Questions

5X5=25M

9. Write the classification of pericyclic reactions
10. Define con and Dis rotation with neat diagram.
11. What are singlet and triplet states?
12. Explain in detail the term functional group inter conversion (FGI) with example
13. What are synthons and synthetic equivalents and give examples for each
14. Explain the stark enamine reaction
15. Explain reduction of aldehydes and ketones by using clemmensen's reduction.
16. Write a note on birch reduction

SECTION-C

III. Answer any FOUR of the following Questions

4X10=40M

17. Write the symmetry properties of molecular orbitals of 1,3 butadiene and 1,3,5-hexatriene
18. What are cycloaddition reactions? Give examples and write the woodward hofmann selection rules for cyclo addition reactions.
19. Describe Jablanskii diagram.
20. Write the retro synthetic analysis of following compounds
a) Aspirin b) Ethyl aceto acetate
21. Write the retro synthetic analysis of following compounds
a) Paracetamol b) Methyl benzoate
22. Describe the applications of Heck reaction and Suzuki coupling reaction
23. Discuss the oxidation of alcohols with the following reagents
a) PCC b) PDC
24. Discuss the reduction reaction with the following reagents
a) Lithium aluminium hydride (LiAlH₄) b) Sodium borohydride (NaBH₄)

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

V – SEMESTER END EXAMINATIONS

Class : III B.Sc (CBZ)

Max Marks : 75

Subject : Chemistry

Pass Mark : 30

Title of Paper : Analysis of Organic Compounds

Duration : 3Hrs

Paper Code : R20CHEA502

Time : 2pm - 5pm

W.E.F : 2022-23

Date : 02-01-2024

SECTION-A

I. Answer any FIVE of the following Questions

5X2=10M

1. Define metastable ion with example.
2. Explain isotope abundance
3. Give the structures and mass values of methyl propionate and propionic acid
4. Write the structures of benzamide and p-nitroaniline
5. What is Partition chromatography?
6. Write the formula of the R_f value.
7. What is Descending paper chromatography?
8. What is Radial paper chromatography?

SECTION-B

II. Answer FIVE the following Questions

5X5=25M

9. Explain Fragmentation patterns in Toluene.
10. Explain Fragmentation patterns in propionic acid
11. Explain the NMR splitting in Methyl propionate
12. Explain the NMR splitting in phenyl acetylene
13. Explain the basic principles involved in chromatography
14. Write a note on types of eluents.
15. Write a note on column chromatography
16. Write the basic principle involved in HPLC.

SECTION-C

III. Answer FOUR the following Questions

4X10=40M

17. Write a note on the mass spectrometry instrumentation.
18. Explain in detail about fragmentation types in mass spectroscopy.
19. Elucidate the structure of propionic acid by using IR, NMR and mass spectral data.
20. Elucidate the structure of p-nitro aniline by using IR, NMR and mass spectral data.
21. Write a note on R_f values and factors affecting R_f values.
22. Write a note on applications of thin – layer chromatography.
23. Write the experimental procedure for paper chromatography.
24. Explain HPLC instrumentation and its applications.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Sc. (MPC, MCCS, CBZ)

Max Marks : 75

Subject : Chemistry

Pass Mark : 30

Title of Paper: Inorganic, Organic & Physical Chemistry

Duration : 3 Hrs

Paper Code : CBCHE501A

Paper Time : 2 pm - 5 pm

W.E.F : 2020-21

Date : 03-01-2024

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain any two types of structural isomerism exhibited by complexes with examples.
2. Write the IUPAC names of the following complexes
(i) $[\text{Co}(\text{NH}_3)_6]\text{Cl}_3$ (ii) $\text{K}_3[\text{Fe}(\text{CN})_6]$?
3. Explain the factors effecting stability of complexes.
4. Explain Mannich reaction.
5. Write about Hoffmann - mustard oil reaction.
6. How primary, secondary and tertiary amines distinguished with Nitrous acid.
7. State and explain first law of thermodynamics.
8. Discuss about the concept of entropy.

SECTION - B

II. Answer ALL the following Questions

5X10=50M

9. Explain the Crystal field splitting of d - orbitals in Octahedral complexes.
(OR)
10. (a) Explain the optical isomerism exhibiting by the complexes with coordination number 4 & 6.
11. (b) Explain the determination of composition of a complex by Job's method.
(OR)
12. (a) Define Magnetic Susceptibility. Explain Gouy's method of determination of magnetic susceptibility of a complex.
13. (b) Write any three methods of preparation of Nitro - alkanes.
(OR)
14. (a) Write about (i) Nef reaction (ii) Halogenation (iii) Reaction with Nitrous acid of Nitro alkanes
15. (a) How do you separate primary, secondary and tertiary amines from a mixture by Hinsberg method.
(OR)
16. (b) Explain the mechanism of (i) Gabriel synthesis (ii) Hoffmann - Bromamide reaction
17. (a) Derive an expression for the efficiency of a reversible heat engine using Carnot's cycle.
(OR)
18. (b) (i) Derive Kirchhoff's equation.
(ii) Explain Joule - Thomson effect & coefficient.

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Room No: 32

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : Bsc(IOT)/Bsc(Data Science)
Subject : Computers
Title of Paper: Html&Angular-Js
Paper Code : IOTCSHAJ501/DSCSCHJ501
W.E.F : 2020-2021

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2pm - 5pm
Date : 02-01-2024

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain the basic structure of an HTML document with example.
2. Explain the working of block elements with objects.
3. Explain working with images like Adding on image, resizing an image in HTML.
4. Explain about text boxes with an example.
5. Explain declaration Vs procedural program.
6. Define Angular JS and explain its advantages.
7. Explain bind with an example.
8. Explain creating services.

SECTION - B

II. Answer ALL the following Questions

5X10=50M

9. Explain about different HTML Tags.

(OR)

10. Explain various types of CSS style sheets.

11. Explain working with tables in HTML.

(OR)

12. Explain any Five FORM Elements.

13. Explain about different types of Built-in filters in Angular JS.

(OR)

14. Explain about Modules in Angular JS.

15. Explain about Event - Handling Directives in Angular JS.

(OR)

16. Briefly describe about ng-reveal directing with an example.

17. Explain how to validate Angular JS Form.

(OR)

18. Explain about Angular JS services \$ window and \$ document.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

V - SEMESTER END EXAMINATIONS

Class : III B.Sc (IOT)
Subject : Electronics
Title of Paper : Robotics And Its Applications
Paper Code : R20IOTA501
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Time : 2pm to 5pm
Date : 27/12/2023.

SECTION-A

I. Answer ALL the following Questions

5X10=50M

1. Explain Artificial Intelligence in Robotics.

(OR)

2. Explain about the history and laws of the robots.

3. What is the sensor and Explain proximity and distance measuring sensors?

(OR)

4. What is tachometers and Explain types of tachometers?

5. Explain gripper design active and passive grippers.

(OR)

6. Explain vacuum magnetic grippers with hooks and scoops.

7. What is the road map path planning?

(OR)

8. Explain cell decomposition path planning.

9. Explain how robot use in agriculture systems.

10. Explain pick and place operation using industrial robot.

SECTION-B

II. Answer any FIVE of the following Questions

5X5=25M

11. Explain Law of robots?

12. Explain science and technology of robots.

13. Explain DC servo motor-types.

14. Explain strain gauge -based force torque sensor.

15. Explain vacuum magnetic grippers.

16. What are the software considerations?

17. Explain image data compression and visual inspection.

18. Explain collision avoidance robots.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Sc. (IOT)	Max Marks : 75
Subject : Electronics	Pass Mark : 30
Title of Paper : Embedded Systems Design with Stm-32	Duration : 3 Hrs
Paper Code : IOTELEA501 / R20 IOTELEA501	Paper Time : 2 pm - 5 pm
W.E.F : 2022-23	Date : 29-12-2023

SECTION - A

I. Answer ALL the following Questions

5X10=50M

1. What is the Purpose of Embedded System and Explain?
(OR)
2. What are the Characteristics of Embedded Systems and explain?
3. Explain the I/O Sub System devices in Embedded System.
(OR)
4. What are the types of memories in Embedded Systems and explain?
5. Explain the development Languages of Embedded Firmware.
(OR)
6. Explain the OS based design approaches of Embedded Firmware.
7. What is Kernel and explain types of Kernel in OS?
(OR)
8. What is RTOS and explain tasks, process and threads in RTOS?
9. Explain Interfacing of ADC using STM32.
(OR)
10. Explain briefly about Timers using STM32.

SECTION - B

II. Answer any FIVE Of the following questions.

5X5=25M

11. Explain different types of components and system integration in Embedded Systems.
12. What are the requirements for designing Hardware and Software of Embedded Systems?
13. Explain about Real Time Clock, Watch dog timer in Embedded Systems.
14. Explain about Reset Circuit, Brownout Protection Circuit.
15. Explain High Level and Assembly Languages with Examples?
16. Explain about RTOS -Device Drivers?
17. Explain about Multiprocessing and Multitasking in RTOS.
18. Explain the features of STM32.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Sc. (IOT)
Subject : Electronics
Title of Paper : Introduction to ARDUINO Programming
Paper Code : IOTELEA502/R2010TELEA502
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2 pm - 5 pm
Date : 30-12-2023

SECTION - A

I. Answer ALL the following Questions

5X10=50M

1. Draw and explain the Arduino Architecture.

(OR)

2. Explain the Concept of Digital and Analog Ports.

3. Explain Arduino I/O Functions.

(OR)

4. Explain Arduino Timers Concepts.

5. What is the Serial Communication? Explain UART.

(OR)

6. Explain GSM Interfacing with Arduino.

7. Explain ESP8266 Wi-Fi Module.

(OR)

8. Explain M2M IoT Protocol.

9. Explain Cloud Architecture.

(OR)

10. Explain IoT Cloud platforms.

SECTION - B

II. Answer any FIVE Of the following questions.

5X5=25M

11. What are the Arduino Applications?

12. What is the IDE?

13. Explain Arduino Variables.

14. Explain Arrays in Arduino.

15. Write a short note on Analog and Digital Sensors.

16. What is the Relay? Explain the working of Relays.

17. What are the IoT Protocols.

18. What is Cloud Computing?

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Sc. (IOT)

Subject : Electronics

Title of Paper: IOT Sensors & Communication Protocols

Paper Code : R20IOTA502

W.E.F : 2022-23

Max Marks : 75

Pass Mark : 30

Duration : 3 Hrs

Paper Time : 2 pm - 5 pm

Date : 28-12-2023

SECTION - A

I. Answer ALL the following Questions

5X10=50M

1. Explain communication techniques.

(OR)

2. Explain data transmission Modes with examples.

3. Explain UART Protocol.

(OR)

4. Explain zig-bee communication protocol.

5. Explain Humidity? Explain capacitive type of humidity sensors.

(OR)

6. Explain the working of Thermistor.

7. Explain the Piezo Resistive force sensor.

(OR)

8. What is Strain? Explain working of Strain Gauges sensor.

9. Explain briefly about Gyroscopes.

(OR)

10. What is the flow sensor? Explain working of ultrasonic flow sensor.

SECTION - B

II. Answer any FIVE Of the following questions.

5X5=25M

11. What is serial and parallel communication?

12. Explain Asynchronous Communication.

13. Explain RS232 communication.

14. Explain the advantages and disadvantages of satellite Communication.

15. Explain the applications of Moisture sensors.

16. Explain Thermal Conductivity.

17. Explain PIR motion sensor.

18. Explain velocity and Acceleration.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Sc. (DS,IOT)

Subject : Computers

Title of Paper: Machine Learning

Paper Code : R20DSCSC501/R20IOTCSC501

W.E.F : 2022-23

Max Marks : 75

Pass Mark : 30

Duration : 3 Hrs

Paper Time : 2 pm - 5 pm

Date : 01-01-2024

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain structured and unstructured data.
2. Explain types of errors in ML.
3. Explain ocean's razor principle.
4. What is Bayesian Reasoning?
5. Description statistics Vs inferential statistics.
6. Explain about Error correction Data Rule.
7. Explain about nonlinear classifier.
8. Explain about Tree pruning.

SECTION - B

II. Answer ALL the following Questions

5X10=50M

9. What are the various types of machine learning Algorithm?

(OR)

10. Explain about examples of applications of Machine learning in diverse fields.

11. Explain about computational learning theory.

(OR)

12. Explain Metrics assessing classification.

13. Explain in detail about KNN.

(OR)

14. Explain about Linear Regression and logistic Regression .

15. Explain Regression in SVM.

(OR)

16. Explain about ^{Neural} network Architecture.

17. Explain about Multi - layer perceptron.

(OR)

18. Explain about strengths and weakness of decision tree approach.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Sc. (DS)
 Subject : Mathematics
 Title of Paper : Numerical Analysis
 Paper Code : DSMAT501
 W.E.F : 2020-21

Max Marks : 75
 Pass Mark : 30
 Duration : 3 Hrs
 Paper Time : 2 pm - 5 pm
 Date : 01-01-2024

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

- Find the relative error if $2/3$ is approximated to 0.667.
- Explain Bisection method.
- Use Newton – Raphson method, establish the iterative formula $x_{n+1} = \frac{1}{3} (2x_n + \frac{N}{x_n^2})$ To calculate the cube root of N
- Construct a forward difference table and evaluate $\Delta^4 y_1$.

x	1	2	3	4	5
y	2	5	10	20	30

- Find $\Delta^2 \left[\frac{5x+12}{x^2+5x+6} \right]$.
- Apply Gauss forward formula find $f(25)$ given that $f(20) = 14, f(24) = 32, f(28) = 35, f(32) = 40$.
- Use Stirling's Formula to evaluate $f(25)$ from the data.

x	10	20	30	40
F(x)	1.1	2	4.4	7.9

- Find the third divided difference of the function $f(x) = x^2 - 2x$ for the arguments 2,4,9,10.

SECTION - B

II. Answer ALL the following Questions

5X10=50M

- Describe general error formula.

(OR)

- If $R = \frac{4x^2y^3}{z^4}$ and errors in x,y,z be 0.001. Show that the maximum relative error at $x=y=z=1$ is 0.009.

- Find a real root of the equation $f(x) = x^3 - x - 4 = 0$ by the method of false position.

(OR)

- Find the root of $f(x) = x^3 + x^2 - 1 = 0$ by iteration method.

- Prove that (1) $\Delta = \frac{1}{2} \delta^2 + \delta \left(1 + \frac{\delta^2}{4} \right)^{1/2}$ (2) $\delta^3 y_{1/2} = y_2 - 3y_1 + 3y_0 - y_{-1}$

(OR)

- Prove that (1) $u_3 = u_2 + \Delta u_1 + \Delta^2 u_0 + \Delta^3 u_0$. (2) $u_4 = u_3 + \Delta u_2 + \Delta^2 u_1 + \Delta^3 u_1$.

- State and prove Newton's forward interpolation formula.

(P.T.O)

(OR)

16. State and prove Gauss Forward interpolation formula.

17. State and prove Lagrange's Interpolation formula.

(OR)

18. Using Newton's divided difference formula to find $f(8)$ from the following table.

x	1	3	6	10	11
F(x)	3	31	223	1011	1343

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class	: III B.Sc. (DS)	Max Marks	: 75
Subject	: Computers	Pass Mark	: 30
Title of Paper	: Big Data Technology	Duration	: 3 Hrs
Paper Code	: R20DSBDT501/DSBDT502/IOTBOT502/	Paper Time	: 2pm to 5pm
W.E.F	: 2022-23	Date	: 27/12/2023
	R20DSDS 501		

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. What are the features of Distributed file system?
2. Explain about Apache Hadoop and Hadoop Eco System.
3. Explain about Data Serialization.
4. Explain about Reducing phase execution.
5. Explain about Loading Data into HDFS.
6. Explain about Common Hadoop Shell Commands.
7. Explain about HDFS Administering.
8. Explain about Hadoop 2.0 New features.

SECTION -B

II. Answer ALL the following Questions

5X10=50M

9. Explain about Big Data and its importance.

(OR)

10. Explain about Drivers for Big Data.

11. Explain about Moving Data in and out of Hadoop.

(OR)

12. Explain about inputs and outputs of Map reduce.

13. Explain about Map Reduce Architecture.

(OR)

14. Discuss briefly about executing the MAP phase.

15. Explain about Hadoop Map Reduce paradigm.

(OR)

16. Explain about NameNode, Secondary NameNode, and DataNode.

17. Explain about Hadoop ecosystem components.

(OR)

18. Explain about MRv2, YARN.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Sc (DS)

Subject : Computers

Title of Paper: Python Programing

Paper Code : R20DSPP502/DSPP503

W.E.F : 2022-23

Max Marks : 75

Pass Mark : 30

Duration : 3 Hrs

Paper Time : 2 pm - 5 pm

Date : 28.12.2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain the features of python.
2. Explain about dictionaries of python.
3. Explain about python virtual machine (PVM).
4. Explain about anonymous function in python.
5. Explain about packages in python.
6. Explain difference between Java and python.
7. Explain about reading data from key board in python.
8. Explain about over ~~loading~~ *loading* in python.

SECTION -B

II. Answer ALL the following Questions

5X10=50M

9. Explain the *Conditional* statements in python.

(OR)

10. Explain Data types and operators in python.

11. Discuss briefly about methods of tuples with example.

(OR)

12. Explain about methods of lists with example program.

13. Explain briefly about types of function in python with example program.

(OR)

14. Explain about modules in python with examples program.

15. Explain about reading and writing data in to files in python.

(OR)

16. Explain about Exceptions Handling in python.

17. Explain oops concept in python.

(OR)

18. Explain about the threads and multi threading in python.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Voc (WT&SD)
Subject : Computers
Title of Paper: Content Management System
Paper Code : R20WT501/WSCMS501
W.E.F : 2021-22

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2pm to 5pm
Date : 27/12/2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain about webmatrix.
2. Explain about web application.
3. Explain the procedure to select themes in word press.
4. Explain about shopping cart plugin.
5. Explain about sidebar plugin.
6. Explain about extension manager of joomla.
7. Write the procedure to install new template in joomla.
8. Write the procedure to build custom joomla template

SECTION -B

II. Answer ALL the following Questions

5X10=50M

9. Draw and explain wordpress database structure.

(OR)

10. Explain the features of word press.
11. Explain about different types of plugins in wordpress.

(OR)

12. Explain about adding and publishing posts in a website using word press.

13. A) Explain the following.

- a) Calendar plugin.
- b) Search plugin.
- c) Pop up plugin

(OR)

14. Explain about features and advantages of live chat plugin.

15. Explain about Joomla control panel.

(OR)

16. Explain about Component menu.

17. Write the procedure to display content in XHTML.

(OR)

18. Explain about Custom Forms in Joomla.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Voc (WS/IT)

Subject : Computers

Title of Paper: Data Management Systems

Paper Code : R20WS503/ITDBMS503/WSDBMS503

W.E.F : 2021-2022

Max Marks : 75

Pass Mark : 30

Duration : 3 Hrs

Paper Time : 2 pm - 5 pm

Date : 29-12-2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain about the classification of DBMS.
2. Explain the advantages of ER Model.
3. Write about building blocks of Entity relationship diagram?
4. What is Key? Explain types of Keys?
5. Explain Domain Relational Calculus.
6. Explain about Sub-queries.
7. Explain about aggregate function.
8. Explain data types in PL / SQL.

SECTION -B

II. Answer ALL the following Questions

5X10=50M

9. Explain about the components of Database Management system.

(OR)

10. Explain about different types of Data Models.

11. What is attribute? Explain the classification of attribute.

(OR)

12. What is EER Model? Explain basic concepts of EER Model.

13. Explain the advantages and disadvantages of relational Algebra.

(OR)

14. What is Normalization? Explain 1NF, 2NF and 3NF with examples.

15. Explain about DML commands.

(OR)

16. Explain joining Database tables with example. (Joins)

17. Explain about looping control statements in PL / SQL.

(OR)

18. Explain about Triggers in PL / SQL.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Voc(WT&SD)
Subject : Computers
Title of Paper: React JS
Paper Code : R20WS504/WSRJS504
W.E.F : 2021-22

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2pm - 5pm
Date : 30-12-2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain about React Versions.
2. Explain create react application.
3. Explain React JS state.
4. Explain about component API.
5. Explain about React JS - Forms.
6. Write about React Lists.
7. Explain about React CSS.
8. Explain about React - Flux Concept.

SECTION - B

II. Answer ALL the following Questions

5X10=50M

9. Write about React components?

(OR)

10. Explain about React JS features.

11. Write about React JS - props.

(OR)

12. Explain React constructor.

13. Write about React JS component life cycle.

(OR)

14. Explain React JS - Events.

15. Write about React JS - Keys?

(OR)

16. Explain about React context.

17. Explain React JS - Higher Order components.

(OR)

18. Explain about React JS - Animations.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Voc (IT&ITeS/WS)
Subject : Computers
Title of Paper: PHP
Paper Code : ITP502/WSP502/R20WS502
W.E.F : 2021-22

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2 pm - 5 pm
Date : 28-12-2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain about different types of variables?
2. Explain about the procedure to create 'constant' variable in PHP?
3. How can we use include in PHP?
4. How to create user defined functions in PHP?
5. How to create a table in HTML page with data in MySQL?
6. Write about how the user edits the data in Database Record?
7. Explain different Input elements in HTML?
8. Explain Procedure for Adding Watermarks in HTML?

SECTION - B

II. Answer ALL the following Questions

5X10=50M

9. Explain about Passing Variables using URL and Forms in PHP?

(OR)

10. Explain about Passing Variables using SESSION and COOKIES in PHP?

11. Explain about Types of Arrays with example?

(OR)

12. Explain control structures in PHP?

13. Explain about Creating Database and Inserting data into database using MySQL?

(OR)

14. Explain the procedure to create MySQL database connection with an example?

15. How can the user Insert & Delete Records in Relational Database?

(OR)

16. Explain about How can we link Forms together in PHP?

17. Explain about validation controls in PHP?

(OR)

18. Explain the procedure to send e-mail in PHP with an example?

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III.B.B.A
Subject : Commerce
Title of Paper: Stress Management
Paper Code : R20BBA501
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2pm to 5pm
Date : 27/12/2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Sources of stress.
2. Alarm stage.
3. Pressure.
4. Work Place conflict.
5. Stress and Behaviour Change.
6. Obesity.
7. Vipasyana.
8. Yoga and Meditation.

SECTION - B

II. Answer any FIVE of following questions

5X10=50M

9. Mention various sources and symptoms of work related stress?
10. Briefly explain Various stress Models?
11. Define conflict? Explain Different types of conflicts?
12. what is meant by pressure? Discuss the general pressure of our society?
13. Discuss various leadership Styles in Stressful and Non stressful Situations?
14. Briefly discuss stress related cardio vascular diseases and treatment methods available to combat stress related cardio vascular diseases?
15. Explain Various relaxation techniques of stress Management?
16. Discuss in brief various behavioural techniques and behavioural assignments of stress controls?

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.B.A
Subject : Commerce
Title of Paper: Performance Management
Paper Code : R20BBA502
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2 pm - 5 pm
Date : 28-12-2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Performance Management.
2. Performance Planning.
3. Performance Appraisal.
4. Merit rating.
5. Employee Development.
6. Types of Appraisal Interviews.
7. Performance Diagnosis.
8. Lean Management.

SECTION - B

II. Answer any FIVE Of following question

5x10=50

9. Explain the steps involved in performance management process.
10. Discuss the advantages of performance management.
11. Explain the process of performance Appraisal.
12. Explain the steps in performance planning.
13. Write about performance management framework.
14. Discuss the methods of performance Appraisal.
15. Explain the pros and cons of 360 Degree Appraisal.
16. Explain the factors that influence performance and strategies to improve performance.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.B.A / III B.com. Computers
Subject : Commerce
Title of Paper : Sales Promotion and Practice
Paper Code : R20BBA503 / R20COMC 504
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2pm-5pm
Date : 30-12-2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. What is sales promotion?
2. What is sales planning?
3. Write about surrogate selling ?
4. Write about sales orientation?
5. Define promotional strategy?
6. Meaning of coupon, discount , exhibition ?
7. What is selling sequence ?
8. Write small note on compensation ?

SECTION -B

II. Answer any FIVE Of following questions.

5X10=50M

9. Write about nature and scope of sales organization ?
10. What are the factors influencing sales promotion?
11. Explain the types of sales promotion ?
12. Explain various strategies of surrogate selling ?
13. Explain the ethical and legal issues in sales promotion ?
14. write qualities of sales manager?
15. Explain point of sale and showrooms ?
16. Write about major steps in sales force management?

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

V SEMESTER END EXAMINATIONS

Class : III BBA
Subject : Commerce
Title of Paper : E-Business
Paper Code : R20BBA504
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2pm - 5pm
Date : 29-12-2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. What are the features of E-commerce?
2. B2B and C2C.
3. Internet Vs Intranet.
4. What is web server?
5. What is Digital Signature.
6. What is E-Retailing?
7. Payment of utilities.
8. What is credit card?

SECTION -B

II. Answer any FIVE Of following questions

5X10= 50M

9. What is E-Commerce? Explain Advantages and disadvantages of E-commerce.
10. What are the different E-commerce business models?
11. What is Internet? Explain various components of Internet.
12. Define IT Act? What are the objectives of IT Act, 2000.
13. What is Firewall? What are the different types of Fire walls?
14. Write about the operational services of E-commerce?
15. Define E-payment system. Explain the working mechanism of e-payment system.
16. What are Digital payment apps? Discuss any two mobile wallet apps?

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.B.A
Subject : Commerce
Title of Paper : Foreign Exchange Management
Paper Code : R20BBA505
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2 pm - 5 pm
Date : 01-01-2024

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Forex Management.
2. Money Market.
3. Euro Bonds.
4. Foreign Exchange Market.
5. Exchange Rate.
6. Forex Trading.
7. Options.
8. Letter of Credit.

SECTION -B

II. Answer any FIVE the following Questions

5X10=50M

9. Explain the scope and significance of the forex management.
10. Explain the relationship between forex management and financial management.
11. Explain about the capital markets and money markets.
12. Discuss the instruments in capital marketing.
13. Explain the functions of foreign exchange market.
14. Explain the mechanics of making foreign payments.
15. Briefly explain about Bills of Exchange.
16. Explain :
 - a) Swaps
 - b) Offshore banking
 - c) Payment terms

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

V SEMESTER END EXAMINATIONS

Class : III BBA
Subject : Commerce
Title of Paper: E-Payment System
Paper Code : R20BBA506
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2pm - 5pm
Date : 02-01-2024

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. NEFT / RTGS.
2. What is Digital token?
3. ATM Networks.
4. What is Fed wire?
5. What is Digital signature?
6. What is Google wallet?
7. What are EIPP providers.
8. What is electronic statement delivery?

SECTION -B

II. Answer any FIVE Of following questions

5X10=50M

9. Explain the Advantages and disadvantages of EDI system.
10. Explain about various Electronic payment modes.
11. What is RTGS? Explain process of Real time Gross settlement system?
12. Explain about cryptographic methods.
13. Explain in detail about digital certification process.
14. Explain about wireless payments.
15. Explain the various types of customer service providers.
16. What are the features of biller service providers?

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Com (Gen, Tp, Comp, Log), BBA
Subject : Commerce
Title of Paper: Business Laws
Paper Code : CBBL501
W.E.F : 2017-18

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2pm to 5pm
Date : 27/12/2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Agreement.
2. Quasi contract.
3. Auction Sales.
4. District Forum.
5. Digital Signature.
6. Minor.
7. Types of Goods.
8. E-Records.

SECTION - B

II. Answer ALL the following Questions

5X10=50M

9. Discuss about the Essential of a valid contract?
(OR)
10. Define contract and explain about the classifications of contracts.
11. Define Minor ? Discuss the Laws relating to Minor?
(OR)
12. Write the rules regarding contingent contracts.
13. Distinguish between sales and agreement to sales?
(OR)
14. Write about implied conditions and implied warranties.
15. Write an essay on consumer protection councils?
(OR)
16. Restrictive and unfair trade practices.
17. Write an essay on E-Governance?
(OR)
18. Write the legal aspects regarding Digital Signature?

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Regd No: 63**KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)****V - SEMESTER END EXAMINATIONS**

Class : III B.Com (Gen, TP, Comp, Log) & BBA
 Subject : Commerce
 Title of Paper : Cost Accounting
 Paper Code : CBCA502A
 W.E.F : 2020-21

Max Marks : 75
 Pass Mark : 30
 Duration : 3 Hrs
 Time : 2pm - 5pm
 Date : 28-12-2023

SECTION-A**5X5=25M****I. Answer any FIVE of the following Questions**

1. State the objectives of Cost accounting
2. What is Financial Accounting
3. Explain the Elements of Cost
4. Discuss about the ABC analysis
5. Write about time rate system of wage payment
6. Explain the classification of overheads
7. What are the features of process costing
8. What is Standard Costing

SECTION-B**5X10=50M****II. Answer ALL the following Questions**

9. Explain the advantages and disadvantages of cost accounting

(OR)

10. From the following particulars prepare a cost sheet showing different elements of a cost for the year ending 31.12.202

	Rs.		Rs.
Cost of materials	1,60,000	Rent, rates, taxes and Insurance	20,000
Wages	2,40,000	Selling expenses	60,000
Manufacturing expenses	1,00,000	General expenses	40,000
Salaries	1,20,000	Sales	8,00,000

11. Explain various material control techniques

(OR)

12. The following particulars are related to material A You are required to prepare a stores ledger using the First In First Out Method (FIFO).

1 st Jan 2005	Opening Stock 1000 units @Rs. 5 each
Receipts:	
3 rd Jan 2005	900 units @Rs. 6 each
11 th Jan 2005	800 units @Rs. 6.20 each
13 th Jan 2005	300 units @Rs. 6.40 each
19 th Jan 2005	200 units @Rs. 6.50 each
Issues:	
7 th Jan 2005	1,200 units
15 th Jan 2005	400 units
17 th Jan 2005	600 units
25 th Jan 2005	600 units

[P.T.O.]

13. Define Labour turnover. Explain its causes

(OR)

14. Calculate the earning of a worker from the following details under
(a) Time rate method (b) Piece rate method, (c) Halsey plan and (d) Rowan plan.

Standard Time	= 60 hours
Time Taken	= 40 hours
Hourly rate of wage	= Rs. 2 per hour plus a dearness allowance of Rs. 2 per hour

15. Write about function wise classification of overheads

(OR)

16. A company has three departments A, B, C and also two service departments D and E. The expenses incurred by them during the month are A : Rs. 80,000, B : Rs. 70,000, C : Rs. 50,000, D : Rs. 23,400, E : Rs. 30,000. The expenses of service departments are apportioned to the production departments on the following basis.

	A	B	C	D	E
Expenses of D	20%	40%	30%	-	10%
Expenses of E	40%	20%	20%	20%	-

Prepare a statement showing the distribution of the two service department expenses to the three departments under the 'Repeated Distribution Method'.

17. An article passes through three processes of manufacture. From the following figures, show the cost of each of three processes during the month of January, 2007.

	Process I	Process II	Process III
Materials	15,000	5,000	2,000
Wages	8,000	20,000	6,000
Direct expenses	2,600	7,200	2,500

The indirect expenses amounting to Rs. 8,500 may be apportioned on the basis of wages. There is no stock in hand and work in progress at the beginning and close of the month.

(OR)

18. From the particulars given below compute

- Material cost variance
- Material usage variance
- Material price variance

Material	Standard Quantity	Standard Price (Rs.)	Actual Quantity	Actual Price (Rs.)
P	20	2	25	2.5
Q	30	3	35	2.75

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

V – SEMESTER END EXAMINATIONS

Class : III B.Com (Gen, TP, Comp, Log)& BBA

Max Marks : 50

Subject : Commerce

Pass Mark : 20

Title of Paper : Office Management

Duration : 2 Hrs

Paper Code : CBOFM503

Time : 2pm - 5 pm

W.E.F : 2017-18

Date : 29-12-2023

SECTION-A

I. Answer any FOUR of the following Questions

4X5=20M

1. What are the features of Modern office?
2. Write about scientific office management.
3. Explain about records retention.
4. Explain common charts of office work simplification.
5. Write about the essentials of a good filing system.
6. Write about office reproduction services.

SECTION-B

II. Answer ALL the following Questions

3X10=30M

7. What are the duties and responsibilities of office manager?

(OR)

8. Explain importance and principles of office layout.

9. Explain the characteristics of good office system.

(OR)

10. What is planning for improving office procedures?

11. Explain the Nature of files and records.

(OR)

12. Explain about ICT Applications in office Management.

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V SEMESTER END EXAMINATION

Class : III B.Com (LOG)
Subject : Commerce
Title of paper : ~~CO~~ ^{prate} Accounting
Subject Code : CBCRA 505
W.E.F : 2017-2018

Max Marks : 75
Pass Marks : 30
Duration : 3 Hrs
Time : 2 pm - 5 pm
Date : 01-01-2024

SECTION-A

Answer any FIVE of the following Questions

5X5 = 25M

1. Explain about Accounting Standard Board.
2. Meaning and Importance of Goodwill.
3. Net Asset method and Yield Method.
4. Bonus Shares?
5. Equity shares and Preference Shares.
6. General Insurance.
7. Valuation Balance Sheet.
8. Re- Insurance.

SECTION-B

Answer ALL of the following Questions

5X10 = 50M

9. List out any 15 Accounting Standards formulated by Accounting Standards board.
(OR)
10. State the objectives and functions of the Accounting Standards board.
11. The following information is available from the books of a trader
 - a) Profit earned in 2009-Rs.50,000; 2010-Rs.60,000; 2011-Rs.55,000
 - b) General Profit rate - 10%
 - c) Capital Employed: Rs.3,50,000
 - d) The Annuity for Rs.1/- is 3.78
 - e) Average non receiving profit included in profits in Rs.4000 compute goodwill following below methods.
 1. Five years of purchases of Super profits.
 2. Capitalisation of Super Profits.
 3. Annuity method.

(OR)

12. What are the factors that should be considered in valuing goodwill, briefly explain their importance in the regard.

P.T.O

13. The following is the Balance sheet of XYZ ltd are as under.

Liabilities	Rs.	Assets	Rs.
Creditors	25,000	Land	1,00,000
Outstanding expenses	5,000	Motor Vehicles	60,000
5% debentures	70,000	Fixtures	40,000
Share Capital		Premises	1,00,000
10,000 Equity shares 10/-	1,00,000		
2000; 7% preferencial shares of 100/-	2,00,000	Stock	60,000
Genera Reserve	2,000	Debtors	70,000
Profit & Loss A/C	80,000	Goodwill	40,000
		Cash	10,000
		Under writers commission	2,000
	4,82,000		4,82,000

The following Assets are assessed is as under Land Rs. 1,50,000;

Premises – Rs.1,20,000, Fixtures – Rs.35,000; Goodwill – Rs.70,000

The company adjusted average profit is 1,00,000. Income Tax @ 40%;

Transfer to reserve – 10%, Normal rate of dividend is 12%.

Find out the value of equity share by (Net Asset Value and Yield Method) Fair Value Method.

(OR)

14. What are the factors that influence the value of shares and what circumstances valuation of shares is essential.

15. The Balance Sheet of XLtd as on 31-3-2013 is as follows.

Liabilities	Rs.	Assets	Rs
Share Capital:			
Authorised Capital			
75,000 Equity Shares of Rs.10 each	7,50,000	Sundry Assets	8,50,000
Issued, Subscribed, Called up and paid up capital 40,000 Shares of 10 Rs. Each 7.50 Rs. Paid	3,00,000		
Reserves			
Capital redemption reserve	75,000		
Plant revaluation reserve	10,000		
Securities premium reserve account	75,000		
Development rebate reserve	1,15,000		
Investment allowance reserve	1,75,000		
General Reserve	1,50,000		
	8,50,000		8,50,000

The company wanted to issue bonus shares to its share holders @ one share for every two shares held you are required to pass Journal entries in the books of X Ltd, and show the Balance Sheet.

(OR)

16. Write SEBI Guidelines for issue of Bonus shares.

17 The following are the balances extracted from the ledger of the life insurance corporation as on 31-12-2013.

Particulars	Rs.	Particulars	Rs.
Life Fund at the beginning	14,00,000	Bonus in reduction of premium	2,500
Claims by death	76,000	Preliminary Expenses	600
Claims by maturity	56,000	Claims admitted but not paid at the end of the year	80,000
Premium	2,10,000	Annuities due but not paid	22,000
Management expenses	19,000	Share capital of Rs.100 each share	4,00,000
Commission	26,000	Government Securities	15,00,000
Consideration for annuities granted	10,000	Sundry Assets	4,33,700
Interest, Dividends and Rents	52,000		
Income tax on profit	300		
Fines	100		
Surrenders	21,000		
Annuities	30,000		
Bonus paid in cash	9,000		

From the above particulars prepare the Revenue account and Balance Sheet of the corporation.

Adjustments:

1. Claims covered under reinsurance by death Rs.5000.
2. Further claims intimated (by death) Rs.4000
3. Bonus the reduction of premium Rs.1,000.
4. Interest accrued Rs.15,000.
5. Premium outstanding Rs.10,000.

(OR)

18. Write the difference between Life insurance and General insurance.

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V SEMESTER END EXAMINATIONS

Class	: III BCA	Max Marks	: 75
Subject	: Computer Science	Pass Marks	: 30
Title of paper	: Advanced Java	Duration	: 3 Hrs.
Paper Code	: CBBCA 501	Time	: 2pm to 5pm
W.E. F	: 2017-2018	Date	: 27/12/2023

SECTION - A

Answer any FIVE of the following questions.

5X5=25M

1. What is Servlet? Write a Servlet program to display "Welcome to the World of Servlet Programming".
2. Differentiate Javax.Servlet and Javax.Servlet.http.
3. Explain how we can handle HTTP GET and POST requests?
4. Write short note on:
 1. Servlet Chaining.
 2. Servlet Context.
5. What are the 5 basic types of Elements or Components of JSP?
6. Write a Program for Retrieving the data posted from HTML file to a JSP file.
7. SQL Statements form the core part of almost all JDBC Programs. Explain
8. What are Resultsets? Explain the different types of Resultset.

SECTION - B

Answer ALL the following questions.

5X10=50M

9. Draw and explain the different Phases of Servlet Life Cycle.
(OR)
10. What are the main functions of HTTPServletRequest Interface?
11. Explain Cookies and Write a Sample program on Cookies.
(OR)
12. Explain Session Tracking and Write a Sample program on Session.
13. What is JSP? Explain the role of JSP in the development of Websites. Write a Sample JSP Program.
(OR)
14. Explain the Nine implicit objects of JSP.
15. Explain the different steps to connect a Database using JDBC with an example program.
(OR)
16. What is JDBC Driver. Explain the different types of JDBC drivers.
17. Write a program to insert and Retrieve data from a Database.
(OR)
18. Explain how files are Stored and Retrieved in Database with a simple program.

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Room No: 60

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

V SEMESTER END EXAMINATIONS

Class : III B.C.A
Subject : Computers
Title of Paper : Machine Learning Using Python
Paper Code : R20BCA501
W.E.F : 2022-2023

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2pm to 5pm
Date : 27/12/2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain about Data Preprocessing.
2. Explain about applications of machine learning.
3. How to select and train a model for supervised learning.
4. Explain about Maximum Likelihood Estimation.
5. Explain about Linear Regression.
6. Write about Hierarchical clustering.
7. What is decision tree.
8. Explain about Association Rule.

SECTION -B

II. Answer ALL the following Questions

5X10=50M

9. Explain about Types of Machine Learning.

(OR)

10. Explain about differences between human learning and machine learning?
11. Explain about Model Representation and Interpretability?

(OR)

12. Explain about Evaluating Performance of a Model.
13. Explain about Logistic Regression.

(OR)

14. Explain about Bayes' theorem and Concept Learning?
15. Explain about Support vector machines?

(OR)

16. Write about Random Forests.
17. Explain about Apriori algorithm with an example?

(OR)

18. Explain about Density-based methods?

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.C.A
Subject : Computers
Title of Paper : Digital Imaging
Paper Code : R20BCA502
W.E.F : 2022-2023

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2pm - 5 pm
Date : 28-12-2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain Audio Formats.
2. Explain Video Formats.
3. Explain the GIMP.
4. Explain about rescaling saving files.
5. Explain Changing colors in Layers.
6. Explain Drawing rectangles.
7. Explain Dodge and burn tool.
8. Explain Smudging tool.

SECTION -B

II. Answer ALL the following Questions.

5X10=50M

9. Explain the types of Objects.
(OR)
10. Explain the types of Video Editing.
11. Explain about Feature of Layers Dialog.
(OR)
12. Explain about Image Window Menus.
13. Explain the Rotating and Sharpening.
(OR)
14. Explain the Linking layers together.
15. Explain about Circles and other Shapes.
(OR)
16. Explain about Intelligent Scissors tool.
17. Explain the Filters.
(OR)
18. Explain the Correcting Color balance.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.C.A
Subject : Computers
Title of Paper: Cyber Security And Malware Analysis
Paper Code : R20BCA503
W.E.F : 2022-2023

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2 pm - 5 pm
Date : 29-12-2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain about LAN.
2. What is cyber security?
3. What is NIST cyber security?
4. What is OWASP?
5. Explain about sensitive data exposure.
6. What is malware?
7. Explain about Trojans.
8. Explain cyber crime against individuals.

SECTION - B

II. Answer ALL the following Questions

5X10=50M

9. Explain about types of Networks.

(OR)

10. Explain about TCP / IP protocol suite.

11. Explain about cyber security frame work tiers.

(OR)

12. Explain about the features of NIST cyber security frame work.

13. Explain about security Mis configuration and cross site scripting.

(OR)

14. Explain about broken Authentication and XML External entities.

15. Explain about Ransome ware and Rootkits.

(OR)

16. Explain about Fire walls.

17. Explain about types of cyber crimes.

(OR)

18. Explain cybercrime and punishment in Indian IT Act. 2000.

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Room No: 63

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III BCA & III B.Sc(DS)
Subject : Computer Science
Title of Paper: Operating System
Paper Code : CBBCA503/DSOS504
W.E.F : 2017-18

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2pm - 5pm
Date : 30-12-2023

SECTION - A

Answer any FIVE Of the following questions.

5X5=25M

1. Write about logical and physical address space?
2. Explain critical section problem?
3. Explain process life cycle?
4. Explain about thrashing?
5. Explain about storage management?
6. Explain about swapping?
7. Explain deadlock Characteristics?
8. Explain about magnetic disks?

SECTION - B

Answer ALL the following Questions

5X10=50M

9. Explain different types of operation systems?

(OR)

10. What is system Call? Explain different types of system calls?

11. Explain about different scheduling algorithms in operating systems?

(OR)

12. Explain about FCFS algorithm?

13. Explain about deadlock detection and avoidance?

(OR)

14. Explain dining Philosophers problem?

15. Explain about contiguous memory allocation?

(OR)

16. Explain about segmentation in hardware?

17. Explain about disk management?

(OR)

18. Explain about disk scheduling?

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

V SEMESTER END EXAMINATIONS

Class	: III B.C.A	Max Marks	: 75
Subject	: Computers	Pass Mark	: 30
Title of Paper	: Mobile Application Development	Duration	: 3 Hrs
Paper Code	: R20BCA505	Paper Time	: 2pm - 5pm
W.E.F	: 2022-23	Date	: 01-01-2024

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain Need of Android.
2. Write about Android SDK.
3. Explain Android Virtual Device.
4. Write about Button Component in Android.
5. Explain about Check Box in Android.
6. Explain Radio Button in Android.
7. Explain Types of Android Services.
8. Write about Alarm Clock Application.

SECTION - B

II. Answer ALL the following Questions.

5X10=50M

9. What is Android explain the term of ecosystem in detail?

(OR)

10. Explain Features of Android.

11. What are the steps to install Android Studio?

(OR)

12. What are the steps to install and Configure Android SDK?

13. Explain Grid View in Android with an explain.

(OR)

14. Explain Time and Date picker with an Example.

15. Explain Android Security model.

(OR)

16. Write about Android platform services.

17. Explain working with Audio & Video in android.

(OR)

18. How many types of dialogs are there in android.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III BCA
Subject : Computers
Title of Paper : Software Testing
Paper Code : CBBCA505
W.E.F : 2017-18

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2 pm - 5 pm
Date : 02-01-2024

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Write about the Evaluation of Software Testing?
2. Explain about various states of Bug?
3. Explain Verification activities?
4. Explain Verification requirements?
5. Explain about Error Guessing?
6. Explain Boundary Value Analysis. (BVA)?
7. Explain White Box Testing?
8. Explain about Quality Factors?

SECTION -B

II. Answer ALL the following Questions

5X10=50M

9. Explain about Goals of Software Testing?
(OR)
10. What is BUG? Explain about Life Cycle of a BUG?
11. Explain about various software Testing Methodology?
(OR)
12. Explain Verification of Designing & Code?
13. Explain Robustness Testing Method?
(OR)
14. Explain Equivalence Class Testing?
15. Explain about Basis Path Testing?
(OR)
16. Explain about Data Flow Testing?
17. Explain Test Planning and Test Design?
(OR)
18. Explain Software Quality?

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

V SEMESTER END EXAMINATIONS

Class : III B.C.A
Subject : Computers
Title of Paper : Java Full Stack Development
Paper Code : R20BCA506
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2 pm - 5 pm
Date : 02-01-2024

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain about css id and class attributes.
2. Explain about jsp implicit objects.
3. Explain HttpServletRequest interface.
4. Explain hibernate session.
5. Explain about importance of Object relational mapping.
6. Explain about dependency injection in springs.
7. Explain characteristics of DBMS.
8. Explain about NoSQL databases.

SECTION - B

II. Answer ALL the following Questions

5X10=50M

9. Explain about Bootstrap Pagination in detail.

(OR)

10. Explain different types of Bootstrap Alerts with suitable example.

11. Develop a login application using JSP.

(OR)

12. Explain Servlet life Cycle methods with an example program.

13. Explain procedure to create hibernate application in detail.

(OR)

14. Explain Hibernate Query language with example.

15. Explain about spring MVC annotations.

(OR)

16. Explain singleton and prototype bean scope in spring.

17. Explain ACID properties in DBMS with examples.

(OR)

18. Explain different types of languages in DBMS.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Com
Subject : Computers
Title of Paper : Mobile Application Development
Paper Code : R20BCOMP501
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2 pm - 5P
Date : 01-01-2024

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain Need of Android.
2. Write a short note on JDK.
3. Explain Android virtual Device.
4. Write about Button Component in Android.
5. Write about Text view in Android.
6. Explain about Check Box in Android.
7. Explain Life Cycle of Android Services.
8. Explain working with File in Android.

SECTION -B

II. Answer ALL the following Questions

5X10=50M

9. Explain Tools and software required for developing an Application.

(OR)

10. What is Android ? Explain the term of ecosystem in detail.

11. Explain Android development tools.

(OR)

12. What are the steps to install Android Studio?

13. Explain Toast in Android with an example.

(OR)

14. Explain Time and Date Picker with an Example.

15. Explain Android Security model.

(OR)

16. Write about Android platform services.

17. How many types of dialogs are there in android?

(OR)

18. Explain working with Audio & Video in android.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Com
Subject : Computers
Title of Paper : Mobile Application Development
Paper Code : R20BCOMP501
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2 pm - 5 pm
Date : 01-01-2024

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Explain Need of Android.
2. Write a short note on JDK.
3. Explain Android virtual Device.
4. Write about Button Component in Android.
5. Write about Text view in Android.
6. Explain about Check Box in Android.
7. Explain Life Cycle of Android Services.
8. Explain working with File in Android.

SECTION -B

II. Answer ALL the following Questions

5X10=50M

9. Explain Tools and software required for developing an Application.

(OR)

10. What is Android ? Explain the term of ecosystem in detail.

11. Explain Android development tools.

(OR)

12. What are the steps to install Android Studio?

13. Explain Toast in Android with an example.

(OR)

14. Explain Time and Date Picker with an Example.

15. Explain Android Security model.

(OR)

16. Write about Android platform services.

17. How many types of dialogs are there in android?

(OR)

18. Explain working with Audio & Video in android.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Com.(Computers)
Subject : Computers
Title of Paper : Cyber Security & Malware Analysis
Paper Code : R20BCOMP502
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2 pm - 5 pm
Date : 02-01-2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Write advantages of networks.
2. Write is cyber security.
3. What is OWASP?
4. Explain about injection.
5. Explain about broken access control.
6. What is malware?
7. Write the advantages of antivirus.
8. Explain about cybercrime against individuals.

SECTION -B

II. Answer ALL the following Questions

5X10=50M

9. Explain about TCP/IP protocol suite.

(OR)

10. Explain about OSI reference model.

11. Explain about Features of NIST cyber security framework.

(OR)

12. Explain about cyber security framework tiers.

13. Explain about web application firewall.

(OR)

14. Explain about broken authentication and XML external entities.

15. Explain about process explorer and process monitor.

(OR)

16. Explain about fire walls.

17. Explain about types of cybercrimes.

(OR)

18. Explain about cybercrime and punishments in India IT ACT 2000.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Com(TP & Computers)
 Subject : Commerce
 Title of Paper: Management Accounting & Practice
 Paper Code : R20COMC501/R20COMT501
 W.E.F : 2022-23

Max Marks : 75
 Pass Mark : 30
 Duration : 3 Hrs
 Paper Time : 2pm to 5pm
 Date : 27/12/2023

SECTION - A

I. Answer any FIVE of the following questions.

5X5=25M

1. What is the Significance of Management Accounting?
2. Explain the Nature & Scope of Management Accounting.
3. Explain the meaning of Ratio analysis.
4. What are the limitations of Ratio analysis?
5. Explain the meaning and concept of Working Capital.
6. Explain the Objectives of a Budget.
7. Explain the Uses of Funds Flow Statement.
8. Explain various modes of reporting?

SECTION - B

II. Answer any FIVE of the following Questions

5X10=50M

9. Distinguish between Management Accounting and Financial Accounting.
10. Explain various tools of Management Accounting.
11. The Following Information of a company is given :
 Current Ratio 2.5:1 ; Acid test Ratio 1.5:1 ; Current liabilities Rs.50,000
 Find out: a) Current Assets b) Liquid Assets c) Inventory

12. From the following balance sheets of XYZ and co ltd; you are required to prepare funds flow statements:

Liabilities	2015 Rs.	2016 Rs.	Assets	2015 Rs.	2016 Rs.
Share Capital	1,20,000	1,50,000	Goodwill	10,000	6,000
General Reserve	25,000	28,000	Plant and Machinery	1,00,000	1,20,000
Profit and Loss Account	18,000	32,000	Investments	49,000	62,000
Debentures	80,000	60,000	Debtors	86,000	82,000
Trade Creditors	40,000	46,000	Bills Receivables	14,000	20,000
Bills payable	27,000	20,000	Cash	26,000	34,000
Provision for tax	25,000	34,000	Stock	40,000	38,000
			Preliminary Expenses	10,000	8,000
	3,35,000	3,70,000		3,35,000	3,70,000

Additional information:

1. Dividend paid Rs. 15,000.
2. Depreciation provided on Machinery during the year Rs.25,000.

(P.T.O)

13. From the following balance sheets for the year 2019 and 2020 prepare Cash Flow Statement:

Liabilities	2019 Rs.	2020 Rs.	Assets	2019 Rs.	2020 Rs.
Share capital	1,25,000	1,53,000	Cash	10,000	47,000
Bank loan	40,000	50,000	Debtors	30,000	50,000
Loan	25,000	-----	Stock	35,000	25,000
Creditors	40,000	44,000	Machinery	80,000	55,000
P & L Account	1,00,000	1,20,000	Land	40,000	50,000
			Buildings	35,000	60,000
			Goodwill	1,00,000	80,000
	3,30,000	3,67,000		3,30,000	3,67,000

Additional Information:-

- (a) Dividend paid during the year Rs.15,000
- (b) Rs. 20000 worth of Machinery was sold at book value.

14. Following information relates to a company for a 60% capacity. Prepare a flexible budget for production at 80% and 100% capacity with the following.

Production at 60% capacity = 1200 Units.

Material Rs. 200 per unit

Labour Rs.80 per unit

Expenses Rs. 20 per unit

Factory overheads Rs. 80,000 (40% fixed)

Administrative overheads Rs.60,000 (60% fixed)

15. Distinguish between financial Reporting and Management Reporting.

16. Explain the Strategies for writing effective Reporting.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

V - SEMESTER END EXAMINATIONS

Class : III B.Com (TP & Comp)
Subject : Commerce
Title of Paper : Cost Control Techniques
Paper Code : R20COMC502/R20COMT502
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Time : 2 pm - 5 pm
Date : 28-12-2023

SECTION-A

I. Answer any FIVE of the following Questions

5X5=25M

1. Cost Reduction
2. Cost Audit
3. Categories of ABC
4. Marginal Costing
5. Make or Buy Decision
6. Variance Analysis
7. Kaizen Costing
8. Learning Curve Analysis

SECTION-B

II. Answer ALL the following Questions

5X10=50M

9. Explain various types of Cost Control Techniques?
10. Difference between Cost Control & Cost Reduction?
11. Explain the application on overhead allocation on the basis of ABC?
12. Calculate Break Even Point from the following information

Variable Cost	-	15/- Per Unit
Fixed Cost	-	54,000/-
Selling Price	-	20/- Per Unit

Find Out:

1. BEP Sales
 2. Profit when sales would be Rs.4,00,000/-
 3. Margin of safety when profit is Rs.1,00,000/-
13. The sales and profit during the years were as follows.
- | YEAR | SALES | PROFIT |
|------|----------|--------|
| 2019 | 1,50,000 | 20,000 |
| 2020 | 1,70,000 | 25,000 |

You are required to Calculate:

- 1) P/V Ratio
- 2) Fixed Cost
- 3) Break -Even sales
- 4) The sales required to earn a Profit Rs.40,000.

[P.T.O]

14. Explain the advantages & limitations of Variance Analysis?

15. From the following particulars, compute the following

- a) Material Cost Variance
- b) Material Price Variance
- c) Material Usage Variance

Materials	Standard		Actual	
	Quantity (Kgs)	Price Rs.	Quantity (Kgs)	Price Rs.
A	10	8	10	7
B	8	6	9	7
C	4	12	5	11
	22		24	

16. What are the objectives of Kaizen Costing? Explain its Principles?

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Com(Computers)
Subject : Commerce
Title of Paper: Advertising & Media Planning
Paper Code : R20COMC503/R20COMT503
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2pm - 5pm
Date : 29-12-2023

SECTION - A

I. Answer any FIVE of the following questions.

5X5=25M

1. Social and ethical aspects of Advertising.
2. Criticism of Advertising.
3. DAGMAR.
4. Creating thinking.
5. Electronic Media.
6. Role of Media.
7. Target Audience.
8. Selection of Media.

SECTION -B

II. Answer any FIVE of the following Questions

5X10=50M

9. Explain the Nature and scope of Advertising.
10. Explain about the significance of Advertising.
11. What are the types of Advertising Agencies?
12. Explain briefly about the objectives of Advertising.
13. Explain the creating process in Advertising.
14. What is copy writing? Explain different elements in copy writing.
15. What is media planning? Explain its advantages and disadvantages.
16. Explain about media concentration strategies.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class	: III B.Com (Computers)	Max Marks	: 75
Subject	: Computers	Pass Mark	: 30
Title of Paper	: Introduction to Tally ERP 9[Accounts Only]	Duration	: 3 Hrs
Paper Code	: CBBCOMP502	Paper Time	: 2pm - 5pm
W.E.F	: 2017-18	Date	: 03-01-2024

SECTION - A

I. Answer ALL the following questions.

5X15=75M

1. What is Tally? What are various Features and benefits of Tally Accounting Software?
2. Explain in detail the various fields for creation of Company in Tally?
3. Write a procedure to create a Company, Alter a Company, Shut a Company and Delete a company in Tally?
4. What are the Process of Splitting Company data in Tally?
5. Explain All Accounting Vouchers in Tally with one example each?
6. Explain the Concept of Accounting Ledger? What are the process of Single/ Multiple Ledger Creation, Alteration and Deletion of Accounting Ledger?
7. How do you prepare bank Reconciliation Statement using tally?
8. Write a Procedure to create and implement Foreign Currency Transactions in tally?
9. Explain The Security Control in Tally Software?
10. How to Create an Interest class voucher with Diagram.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Com (Gen, TP, Computers)
Subject : COMMERCE
Title of Paper: INDIRECT TAXES
Paper Code : CBIDT 504
W.E.F : 2017-18

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2 pm - 5 pm
Date : 30-12-2023

SECTION - A

Answer any FIVE Of the following questions.

5X5=25M

1. Bill of Entry
2. CGST
3. Registration limits for GST
4. Composition Levy
5. Exempted goods from GST
6. IGST
7. Goods under customs
8. Tax types.

SECTION -B

Answer ALL the following Questions

5X10=50M

9. Explain various types of Indirect Taxes India ?

(OR)

10. Explain Advantages and Disadvantages of Indirect Taxes ?

11. Explain various types of duties levied under Customs Act ?

(OR)

12. Explain different types of Assessments under Customs Act ?

13. Explain the silent Features of GST ?

(OR)

14. What are the advantages of GST ?

15. What are the Sub-summing of Existing Taxes under GST ?

(OR)

16. Discuss about the Impact of GST in India ?

17. What are various Goods and Services Exempted from Tax under GST ?

(OR)

18. Explain the power to grant Exempted from GST ?

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)**V – SEMESTER END EXAMINATIONS**

Class : III B.Com (Gen, TP, Comp)

Subject : Commerce

Title of Paper : Corporate Accounting and Accounting for Service Organisations

Paper Code : CBCAAS505

W.E.F : 2017-18

Max Marks : 75

Pass Mark : 30

Duration : 3 Hrs

Time : 2 pm : 5 pm

Date : 01-06-2024

SECTION-A**5X5=25M****I. Answer any FIVE of the following Questions**

1. Company Final Accounts
2. Need for Valuation of Shares
3. Shares
4. Non - profit organisations
5. Valuation Balance Sheet
6. Insurance
7. Slip System
8. Corporate dividend tax

SECTION-B**5X10=50M****II. Answer ALL the following Questions**

9. Distinguish between Receipts and Payments account and Income and Expenditure account

(OR)

10. Write about various types of Non - profit organisations
11. Explain various provisions relating to preparation of final accounts

(OR)

12. The trial balance of Vishnu Company as on 31-03-2013

Debit Balances	Rs.	Credit Balances	Rs.
Investments	24,500	Share capital	1,25,000
Staff welfare expenses	37,500	Reserve	6,500
Opening stock	75,000	Sales	2,25,000
Purchases	57,500	Discount(Cr.)	14,000
Wages	30,000	P & L Account	19,500
Salaries	4,000	Creditors	10,000
Rent	2,500		
Debtors	31,000		
Plant and Machinery	15,000		
Furniture	9,000		
Sundry expenses	4,500		
Dividend paid	6,000		
Trade marks	8,500		
Cash at bank	45,000		
Difference in trial balance	50,000		
	4,00,000		4,00,000

Adjustments:

- a) Closing stock was Rs.95,000
 - b) Depreciate plant and machinery at 20%
 - c) Make a provision for income tax at 50%
 - d) Ignore corporate dividend tax
 - e) Outstanding staff welfare bill Rs. 2,500
- Prepare statement of Profit and Loss and the balance sheet of the company.

(P.T.O)

13. Give a Proforma of Income Statement of a Banking Company

(OR)

14. From the following information prepare profit and loss account of Vani bank Ltd. for the year ended 31.3.2005.

Particulars	Rs.	Particulars	Rs.
Interest on Loans	2,59,000	Interest on overdrafts	1,54,000
Interest on Fixed deposits	3,17,000	Directors fee	3,000
Rebate on bills discounted	49,000	Auditors fee	1,200
Commission	8,200	Interest on Savings bank deposits	68,000
Payment to Employees	54,000	Postage, Telegrams	1,400
Discount on bills discounted	1,55,000	Printing and Stationary	2,900
Interest on Cash credits	2,23,000	Sundry charges	1,700
Rent and Taxes	18,000		

Additional Information:

1. Provide for Contingencies Reserve Rs.20,000

2. Transfer 1,55,700 to Reserve fund.

3. Transfer Rs. 20,000 to Central government.

15. Write the difference between Life Insurance and General Insurance

(OR)

16. Prepare Revenue Account of LIC West Zone from the following.

Particulars	Rs.	Particulars	Rs.
Claims by death	76,000	Expenses of management	31,924
Premiums	7,26,690	Commission	9,570
Consideration for annuities granted	82,120	IT on interim dividend	35,710
Bonus paid in cash	2,420	Bonus in reduction of premium	980
Claims by maturity	30,250	Life insurance fund on 1-4-2009	15,00,000
Transfer fees	129	Interest, Dividend	97,836
Annuities paid	53,454	Surrenders	13,140
Dividends paid on capital	5,500		

Paid up capital of the corporation is 5,00,000 and the net liability as per actuary's valuation is 10,00,000 on 31.12.2010.

17. Write various methods to value the share of a Company

(OR)

18. The balance sheet of Deepak Ltd., as on 31-03-2010 was as under

Liabilities	Rs.	Assets	Rs.
4000 equity shares of Rs.100 each	4,00,000	Land & Buildings	2,50,000
General Reserve	50,000	Machinery	1,20,000
Profit and Loss A/C	50,000	Investment at Cost (Market value Rs.60,000)	70,000
Creditors	90,000	Debtors	1,00,000
Provision for Taxation	40,000	Stock	80,000
		Cash at Bank	10,000
	6,30,000		6,30,000

Additional Information:

a) Land and Buildings and Machinery are revalued at Rs.2,40,000 and Rs.95,000.

b) Of the total debtors Rs.5,000 are bad.

c) Good will is to be taken at Rs.50,000.

d) Normal rate of return 15%, Expected rate of return 20%.

Calculate fair value of equity share.

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KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Com.(Computers)
Subject : Computers
Title of Paper: Cyber Security & Malware Analysis
Paper Code : R20BCOMP502
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2 pm - 5 pm
Date : 02-01-2023

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. Write advantages of networks.
2. Write is cyber security.
3. What is OWASP?
4. Explain about injection.
5. Explain about broken access control.
6. What is malware?
7. Write the advantages of antivirus.
8. Explain about cybercrime against individuals.

SECTION -B

II. Answer ALL the following Questions

5X10=50M

9. Explain about TCP/IP protocol suite.
(OR)
10. Explain about OSI reference model.
11. Explain about Features of NIST cyber security framework.
(OR)
12. Explain about cyber security framework tiers.
13. Explain about web application firewall.
(OR)
14. Explain about broken authentication and XML external entities.
15. Explain about process explorer and process monitor.
(OR)
16. Explain about fire walls.
17. Explain about types of cybercrimes.
(OR)
18. Explain about cybercrime and punishments in India IT ACT 2000.

Regd No: _____

Room No: 02

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)
V SEMESTER END EXAMINATIONS

Class : III B.Sc. (DS, IOT)
Subject : Computers
Title of Paper : PHP & MYSQL
Paper Code : R20DSCS502/R20IOTCSC502
W.E.F : 2022-23

Max Marks : 75
Pass Mark : 30
Duration : 3 Hrs
Paper Time : 2 pm - 5 pm
Date : 02-01-2024

SECTION - A

I. Answer any FIVE Of the following questions.

5X5=25M

1. What is formatting? Explain the tags used to format text in HTML?
2. Explain Properties and Values in Cascading Style Sheets?
3. Explain the Operators in JavaScript.
4. Explain Date Object in JavaScript.
5. What is a variable? How to declare variable in PHP? Explain their scope.
6. How to draw a New Image?
7. How to Allow Users to Upload Images.
8. Explain Grouping and Having Clause in MYSQL.

SECTION -B

II. Answer ALL the following Questions

5X10=50M

9. What is list? Explain various types of lists in HTML?

(OR)

10. What is CSS? Explain types of CSS?

11. Explain the Control structures in JavaScript.

(OR)

12. Explain the string and mathematical functions in JavaScript.

13. What is an Array? What are different types Arrays available in PHP?

(OR)

14. How to create classes and objects in PHP.

15. What is a session? How to handle Sessions in PHP?

(OR)

16. write the PHP code for image creation from user Input.

17. Explain DML Commands in MYSQL.

(OR)

18. Explain All clauses (where, order by, group by, having) using in MYSQL.

Room No: _____

Regd No: _____

KAKARAPARTI BHAVANARAYANA COLLEGE (AUTONOMOUS)

V – SEMESTER END EXAMINATIONS

Class : III B.Com (Comp)

Max Marks : 75

Subject : Computer Science

Pass Mark : 30

Title of Paper : Principles of Software Engineering

Duration : 3 Hrs

Paper Code : CBBCOMP503

Time : 2 pm - 5 pm

W.E.F : 2017-18

Date : 04-01-2024

SECTION-A

I. Answer any FIVE of the following Questions

5X5=25M

1. Explain about CMMi levels.
2. Explain characteristics of software.
3. Software applications.
4. Explain about waterfall model.
5. Explain scope of software.
6. Explain about DRE.
7. Explain about Resources.
8. Explain about measuring quality.

SECTION-B

II. Answer ALL the following Questions

5X10=50M

9. Define software Engineering and explain about process Engineering.

(OR)

10. Explain about various types of software.

11. Explain about spiral model.

(OR)

12. Explain the concurrent development model.

13. Explain about problem decomposition.

(OR)

14. Explain the management spectrum.

15. Explain about size-oriented metrics.

(OR)

16. Explain extended function point metrics.

17. Explain about Basic and intermediate COCOMO models.

(OR)

18. Explain Decomposition Techniques.