Date: 28/6/2022

To,
The Principal
Karnatak Arts, Science and Commerce College, Bidar.

Sub: Request to grant permission to continue Certificate course on "Inverter and UPS" in the month of June 2022. Reg.

Respected Sir,

As per the guidelines issued by IQAC, we would like to start the Certificate course on "Inverter and UPS" for the academic year 2021-22 with intake of 15 students. Please permit us to continue the add-on course and do the needful.

Thanking You.

Course In-charge

Head
Department of Electronics

HOD
Dept. of Electronics
Karnatak Arts Sci. &Com. College Bidar

KARNATAK ARTS SCIENCE AND COMMERCE COLLEGE, BIDAR

Certificate Course on

INVERTER AND UPS

Preamble

Our college is affiliated to Gulbarga University, Kalaburagi. There is no flexibility in modifying the curriculum to fulfill the basic requirement of industry. Establishing collaboration with M/S Bhavani Industries, Bidar: a pioneer industry in design and construction of UPS and Inverter, curriculum is designed with their basic requirements. We have an MoU with said industry where students and staff exchange programmes are organized.

Curriculum mainly concentrates on understanding working principle of Invert and UPS. Further, an attempt has also been made to impart the knowledge of stabilizer.

The course is 30Hrs of 2 credits and duration of four months.

It is expected that students becomes self entrepreneur and get opportunity in UPS and Inverter Industries.

Exam Pattern: The exam is of 50 Marks of MCQ type

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BIDAR-585401

Minutes of Meeting of Institutional Board of Studies for Add-on Course on

Inverter and Ups

The institutional BOS meeting of the Department of Electronics for the add-on course on "**Inverter and Ups**" held on 2nd January 2020 in Electronics department at 10:30 am.

INSTITUTIONAL BOS

Sl.No	Name	Institute	Designation
1.	Sri. Rajendra Biradar	Head, Department of Electronics, Karnatak Arts, Science and Commerce College, Bidar.	Chairman
2.	Dr.M.S.Chelva.	Associate Professor, Department of Electronics	Member Internal Expert
3.	Sri.A.V.Chikkamanur	Associate Professor, Department of Electronics.	Member Internal Expert
4.	Sri.S.V.Biradar.	Associate Professor, Department of Electronics.	Member Internal Expert
5.	Dr. Giriga Mangalgatty.	Assistant Professor and HOD of Electronics, Govt.First grade college, Bidar.	External Expert

In the beginning of the meeting the Chairman of the Institutional BOS welcomed all the members and briefed them about the progress of the Department of Electronics. The members expressed their highly appreciation and satisfaction about the courses and activities of the Department.

The Institutional BOS discussed and resolved the following items

Item 1. Starting of the add - on course on Inverter and Ups.

The BOS discussed the item and resolved to start the add -on course from January 2020.

Item 2. Approval of the Syllabus for add-on course.

The BOS discussed and approved the syllabus for the add-on course on **Inverter and Ups.**

Item 3. Criteria for admission, regulation and policies to run the course and exam pattern.

The BOS discussed and approved the criteria for admission and resolved that the student should have completed successfully 10+2 with science faculty, should be currently in B.Sc Course with Electronics as a subject in Karnatak college, Bidar. In addition to this BOS also finalized the rules and regulations to smooth conduct of course and pattern.

Meeting of BOS is concluded with vote of thanks by Sri Rajendra Biradar, Head Department of Electronics .

Members present

1. *Sri. Rajendra Biradar*
2. *Dr.M.S.Chelva.*
3. *Sri.A.V.Chikkamanur*
4. *Sri.S.V.Biradar.*
5. *Dr. Giriga Mangalgatty.* [External member].

IQAC CO-ORDINATOR

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DPARTMENT OF ELECTRONICS

Syllabus: Inverter and UPS

Chapters Name	Contents	Teaching Hours
Understanding working principle of Inverter and UPS	Introduction of Inverter, UPS, Block diagram and their working, square wave generator, PWM, DC to AC converter and their Specifications	20
Understanding working principle of stabilizers	Need of stabilizers, working principle, types of stabilizer, auto circuit of stabilizer, cut and automatic stabilizer, study of control circuit for stabilizer.	10

References:

1. Basic Electronics-Repair and maintenance of power supply, inverter and UPS-NIMI Published by National Instructional Media Institute, Chennai.
2. Switching power supply design, 3rd Ed. By Abraham Pressman.
3. Uninterruptable power supply by Alexander King, William Knight McGraw Hill Professional.

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College With Potential for Excellence

Department of Electronics

Date: 01/07/2022

NOTICE

All the students are hereby informed that, the Department of Electronics is starting the add-on Course on "Inverter and UPS" from the 04/07/ 2022; interested students can enroll their names on or before 03/07/2022 in the Department of Electronics.

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ADMISSION FORM

Certificate/Value added/Skill Development/Diploma/Advance Diploma Courses
&
IAS/IPS/NET/SET Coaching Classes

Name of the Department Electronics Year 2021-22

Name of the Student Florence

Father's/Guardian's Name Thomson.

Date of Birth — Date: 01 Month: 12 Year: 1999

Address for Correspondence :

H.No. 12-1-242/1 Jerusalem colony behind Karnatak arts Science and Commerece College Bidar

Semester/Class : BSc VI th

Register No : S2063048

Percentage of previous semester :

Contact No : 9481633044

E-Mail ID : florencemethre@gmail.com.

Course to be Joined: Inverter and UPS

Signature of the Student

HOD/Coordinator

Dept. of Electronics
Karnatak Arts Sci. &Com. College Bidar

Principal

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BIDAR-585401

Add on Course on Inverter and UPS

List of Students (2021-2022)

Sl. No.	Register Number	Name of the student
1	S2063011	Ajay Giri
2	S2062995	Md.zohaib Ali
3	S2063036	Dilip Natikar
4	S2063048	Florance Thomson
5	S2062996	Sujata basavaraj
6	S2063008	Sangeete Tukaram
7	S2062908	Divyarani Dasharat
8	S2063041	Priya Suresh
9	S2063054	Swaraj Patil
10	S2063075	Padmapriya S
11	S2062973	Amar Vithal
12	S2062955	Priyanka Anilkumar
13	S2063111	Pankaj Kambale
14	S2063057	Santosh Vishwanath
15	S2062947	Sainath Sidramappa

Course In-charge

H O D

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IQAC, Coordinator
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Department of Electronics

Date: 04/07/2022

DPARTMENT OF ELECTRONICS

Subject: "Inverter and UPS"

All the students of Certificate Course are here by informed to attend Classes regularly as per the time table displayed on the notice board (Even semester time table).

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DPARTMENT OF ELECTRONICS

Add on course on Inverter and UPS

Time-Table-(2021-2022)

Monday	9.30 to 10.30 pm	Friday	1.30 to 2.30 pm
Tuesday	9.30 to 10.30 pm	Saturday	1.30 to 2.30 pm

Course In-charge

HOD

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Department of Electronics

Date: 27/08/2022

NOTICE

All the students enrolled in Add-on Course on "Inverter and UPS" are hereby informed to attend the examination scheduled on 30/08/2022 from 9-10AM.

Course In-charge

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Add-on course INVERTER AND UPS

Date : 30-08-2022 Max. Marks : 50

Question Paper Time : 60 Minutes

3. What is the minimum permissible single phase working if the declared voltage is 240V as per ISI?
   b) 233 b)228 c) 216 d)211
4. The full for of UPS is
   a)Undersized Power Supply b) Uninterrupted Power Supply
   c) Uneven power Supply d) Unwanted Power Supply

3. What will be the backup time of a UPS if it is backed by a 150 Ah, 12V battery driving a load of 150W?
   b) 14h b) 10h c)16h d)12h
6. What type of power supply is mandatory for a life support system?
   b) PDMS b) UPS c) stabilizer d) RPS
7. What device has to be added for running three phase 5HP motor from the available single phase source?
   a)STAR /DELTA starter b) Inverter/UPS
   c) DOL starter d) Not possible
6. Which component makes an Online UPS different from Offline UPS?
   a) Charge controller b) Battery c) Static switch d)AC/DC rectifier
16. Which is frequency converter?
   b) Rectifier b) DC chopper c) Cyclo converter d) DC to AC converter
17. Which electronic circuit is used in a automatic voltage stabilizer to produce constant output voltage?
   b) Rectifier b) Amplifier c)Oscillator d)Feedback circuit
18. Which feedback network is used for automatic voltages stabilizer?
   c) Current divider network b)Voltage divider network
   d) Tapped transformer network d) Resistance temperature detector network
19. Which electrical device is actuating the voltages in a stepped voltage stabilizer?
   b) Auto stat b) Output transformer c) Over voltage relay d) Under voltage relay

24. What is effect of loading of the cell, the current strength falls and becomes zero?

a) Buckling b) Polarization c) Local action d) Amalgamation

25. What is the reason for having low back up time in UPS?

a) Fault in inverter circuit b) Battery is short circuited

c) Mains earthing is not proper d) Ampere hour(AH) capacity of battery is not sufficient

26. Which of the following is used with critical load like hospital intensive care unit where a power failure can cause lot of inconvenience?

b) UPS b) LPS c) SMPS d)SCS

27. UPS finds application in

a) Battery powered vehicle b) Electric traction c) HVDC d)Computer power supply

28. An online UPS requires

a) Inductor b) Capacitor c)Battery d) Resistor

29. Phase information of UPS is of no use during

a) voltage dip b) long sags c) interruptions d)All of the aboveP

30. Draw the electrical symbol of an inverter----------.

31. How the backup time of UPS can be increased

a) Increase the VA rating of UPS b) Increase the AH capacity of battery

c) Decrease the AH capacity of battery d) Maintain battery terminal voltage always 90% of rating

32. What is the reason for tripping the UPS with full load?

a) Main supply failure b) Incorrect over load settings

c) Battery charger input fuse blown out d) Loose connection in battery terminal

33. Which is the cause for the fault if the output of voltage of UPS is higher than normal?

a) Battery get short circuited b) Defective feedback circuit

c) Input voltage is very high d) Relay points are joined together

34. A capacitive load in voltage source inverters generates

a)Small current spikes and can be reduced by using an inductive filter

b) Large current spikes and can be increased by using an inductive filter

c)Small current spikes and can be increased by using an inductive filter

d) Large current spikes and can be reduced by using an inductive filter

35. The ratio of DC power output to applied input AC power in the rectifier is known as -----.

a) Ripple factor b) Rectifier efficiency c) Peak Inverse Voltage d) Ripple frequency

36. _____ is the process of the solder molecules combining with the molecules of the metals being soldered.

a) Soldering b) Desoldering c) Wetting d) Tinnin

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DEPARTMENT OF ELECTRONICS

Add on Course on Inverter and UPS

Examination attendance - 2021-22 Date: 30/08/22

Sl No	Register number	Name of the student	Signature
1	S2063011	Ajay Giri	
2	S2062995	Md.zohaib Ali	
3	S2063036	Dilip Natikar	
4	S2063048	Horance Thomson	
5	S2062996	Sujata basavaraj	
6	S2063008	Sangeete Tukaram	
7	S2062908	Divyarani Dasharat	
8	S2063041	Priya Suresh	
9	S2063054	Swaraj Patil	
10	S2063075	Padmapriya S	
11	S2062973	Amar Vithal	
12	S2062955	Priyanka Anilkumar	
13	S2063111	Pankaj Kambale	
14	S2063057	Santosh Vishwanath	
15	S2062947	Sainath Sidramappa	

Course In charge HOD IQAC CO-ORDINATOR PRINCIPAL

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KRE SOCIETY'S

KARNATAK ARTS SCIENCE AND COMMERCE COLLEGE BIDAR

DEPARTMENT OF ELECTRONICS

RESPONSE SHEET

1) Name of the course: Inverter and UPS

2) Name of the student: Padmapriya Reddy

3) Class in which studying: B.Sc VIth sem

4) Reg. No. of student: S2063075

5) Date of exam: 30/08/2022

48/50

Note: All the students are informed to put Right mark for the correct answer in the appropriate circle

	A	B	C	D
1		✓		
2		✓		
3				✓
4		✓		
5		✓		
6			✓	
7			✓	
8		✓		
9		✓		
10	✓			
11	✓			
12				✓
13				✓
14			✓	
15			✓	
16	✓			
17			✓	
18			✓	
19				✓
20				✓
21				✓
22	✓			
23	✓			
24		✓		
25				✓
26	✓			
27			✓	
28			✓	
29				✓
30				
31		✓		
32		✓		
33		✓		
34		✓		
35		✓		
36		✓		
37	✓			
38	✓			
39				✓
40		✓		
41			✓	
42			✓	
43				✓
44		✓		
45			✓	
46	✓			
47			✓	
48					Parallel cap
49					sq. wave
50					conducts for 1800

SIGNATURE OF THE INVEGILATOR

SIGNATURE OF THE H.O.D

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DPARTMENT OF ELECTRONICS

Add on course on Inverter and UPS

MARKS-LIST(2021-2022)

Sl. No.	Register Number	Name of the student	Marks obtained out of 50
1	S2063011	Ajay Giri	35
2	S2062995	Md.zohaib Ali	37
3	S2063036	Dilip Natikar	41
4	S2063048	Florance thomson	39
5	S2062996	Sujata Basavaraj	40
6	S2063008	Sangeete Tukaram	38
7	S2062908	Divyarani Dasharat	43
8	S2063041	Priya Suresh	41
9	S2063054	Swaraj Patil	32
10	S2063075	Padmapriya. S	48
11	S2062973	Amar Vithal	39
12	S2062955	Priyanka Anilkumar	41
13	S2063111	Pankaj Kambale	42
14	S2063057	Santosh Vishwanath	36
15	S2062947	Sainath Sidramappa	38

Course In-charge

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Add-on course Report and Outcome Analysis (2021-22)

Name of the Course: Add –on course on Inverter and UPS

Name of the Department: Electronics

Name of the BOS Chairman: Dr. Rajendra Biradar(Assoc. Prof. and Head Dept. of Electronics)

No. of the Students Enrolled: 15

Date of BOS Meeting: 2 January, 2020

Date of Start of Course: 4 July, 2022

Date of End of Course: 31 August, 2022

Our college is affiliated to Gulbarga University, Kalaburagi. There is no flexibility in modifying the curriculum to fulfill the basic requirement of industry, to bridge this gap, the department of Electronics started the add-on course on Inverter and UPS by collaborating with M/S Bhavani Industries, Bidar: a pioneer industry in design and construction of UPS and Inverter, curriculum was designed with their basic requirements. We have a MoU with said industry where students and staff exchange programmes were organized.

Curriculum mainly concentrates on understanding of working principle of Invert and UPS. Further, an attempt has also been made to impart the knowledge of stabilizer. Students also learned the industrial skills by visiting the workshop of Bhavani Industry.

The course was 30 contact hrs of 2 credits, total 15 students actively participated in the course and certificates were distributed after conducting the MCQ based course end examination.

Outcome of the Course: The course helps to gain the entrepreneur and industrial skills which helps the students to become self entrepreneur and get opportunity in UPS and Inverter Industries.

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← Microsoftware

	01 Each
	7 Volumes
	3 Volumes
	01 Vol Each
	12 Volumes
	12 Volumes
	1 Volumes
	11 Volumes

ADD on COURSE ON "UPS and INVERTER" year (2021-22).

Karnatak Arts, Science And Commerce College Bidar

K.R.E. Society's

Students Attendance Register

For the Month of 20

Admission No.	Roll Number	Names	Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	1	Ajay Giri															
	2	md. Zohaib Ali															
	3	Dilip Nalikar															
	4	Florence Thomson															
	5	Sujata Baswaraj															
	6	Sangeeta Tukaram															
	7	Diggavi Dashrath															
	8	Bijya Suresh															
	9	Swaraj Patil															
	10	Padmapriya S.															
	11	Amar Vithal															
	12	Priyanka Anilkumar.															
	13	Pankaj Kamble.															
	14	Santosh Vishwanath.															
	15	Sainath Sidramappa.															

Signature of Lecturer with Date

Signature of H.O.D.

Admission No.	Roll Number	Names	Date	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	1	Ajay Giri															
	2	md. Zohaib Ali															
	3	Dilip Nalikar															
	4	Florence Thomson															
	5	Sujata Baswaraj															
	6	Sangeeta Tukaram															
	7	Diggavi Dashrath															
	8	Bijya Suresh															
	9	Swaraj Patil															
	10	Padmapriya S.															
	11	Amar Vithal															
	12	Priyanka Anilkumar.															
	13	Pankaj Kamble.															
	14	Santosh Vishwanath.															
	15	Sainath Sidramappa.															

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