

**B.L.D.E. Association's  
S.B. ARTS AND K.C.P. SCIENCE COLLEGE,  
VIJAYAPUR**



**Department of Physics & Electronics**

**VALUE ADDED COURSE ON  
REGULATED POWER SUPPLY**

**BATCH-I**

**2018-19**

**(For B.Sc Physics & Electronics)**

B.L.D.E. Association's  
S.B. ARTS AND K.C.P. SCIENCE COLLEGE, VIJAYAPUR

Department of Physics & Electronics

VALUE ADDED COURSE

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Head  
Department of Physics  
S.B.Arts & K.C.P.Science College  
Vijayapur-586103.



**IQAC, Co-ordinator**  
S.B.Arts & K.C.P.Science College,  
Vijayapur.



**Principal,**  
S.B. Arts and KCP Science College  
VIJAYAPUR

B.L.D.E. Association's  
**S.B. ARTS AND K.C.P. SCIENCE COLLEGE, VIJAYAPUR**  
**Department of Physics & Electronics**

**Value added Course for B.Sc Physics & Electronics**

**Course Title:** Regulated Power Supply

**Course Code:** SBKCP PHY01

**AIM**

To ensure excellent standards that would secure them international acclimation and leadership in tremendous challenging world.

To developing the overall personality of its students by making them not only excellent professionals but also good individuals with understanding and regard for human values.

**OBJECTIVES:**

To provide additional learners-centric graded skill oriented technical training with primary objectives of improving the employability skill.

To provide students an understanding of expectations of industry.

To provide an opportunity to develop inter-disciplinary skills.

To identify and develop the talents of students community in both curricular and extra-curricular areas.

**VISION:**

To be a centre of excellence through the process of self evaluation and continual renewal in all our endeavours, namely, learning, teaching, research, consultancy and other related services.

**MISSION:**

We strive towards equipping young people with value based holistic education to provide them a participative and growth oriented ambience.

**I. SYLLABUS****Total hours allotted : 30 hours**

**Unit I:** Basic elements (Resistor, Inductor & Capacitor) & its working. Colour coding of resistor & current rating of resistance. Transformers its principal working, types of transformer current rating of transformer. Multimeter & testing of components using multimeter

4 hours

**Unit II:** Instantaneous current time period, frequency, wavelength, peak or maximum amplitude, peak to peak value, effective current or RMS value of current & voltage, the average current & Voltage, power in ac ckt. Phase & phase difference. Inductive reactance & capacitive reactance.

4 hours

**Unit III:** Working of half wave, full wave & bridge rectifier. Rectifier with capacitor filter (shunt capacitor filter), with series inductor filter, LC filter &  $\pi$ -section filter. Ripple factor, efficiency & voltage regulation for each filter.

6 hours

**Unit IV: Zener diode:** Its working & characteristics, zener diode is used as regulated power supply. Design consideration with one example. Concept of IC, Three pin IC regulator block diagram, 78xx series & 79xx series. Dual power supply.

6 hours

**Practicals:** Five practical's of two hour duration

10 hours

### List of experiments

1. Half wave, full wave & bridge rectifier
2. Rectifier with capacitor filter (shunt capacitor filter)
3. Rectifier with LC filter &  $\pi$ -section filter.
4. Characteristics, zener diode & used as regulated power supply.
5. Dual power supply.

### Note:

1. Experiments are of two hours duration.
2. Five experiments to be performed.

### Reference books

- 1) Solid state electronics by Agarawal & Agarawal
- 2) Basics electronics by B.K. Bagade & Singh
- 3) Principales of electronics by Malivno
- 4) Electricity & magnetism by Murgeshan
- 5) Electricity & magnetism by Brijjal & shubruman

## II. Duration of the Course:

Theory of twenty hours and Practical ten hours **Total 30 Hours**

## V. Evaluation:

Students will be evaluated through the examination conducted by the physics department at the end of the course and they will be awarded course certificate accordingly.

Theory Paper of 60 marks

Practical of 40 marks

Total 100 marks



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**DEPARTMENT OF PHYSICS & ELECTRONICS**

Date: 2-7-2018


## Value Added Course

### Notice


Our Department is conducting "Value added course" (30 hours duration) on "Regulated Power Supply" for B.Sc. Students in Physics & Electronics during the year 2018-19. Interested Students give their names to Head of the Department on or before 8-7-2018.

Certificate will be issued to students after completing the Value Added Course from the College.

  
Head of the Department.

  
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**DEPARTMENT OF PHYSICS & ELECTRONICS**

***Value Added Course – Regulated power supply***

**List of the faculty**

**2018-19**

**Batch - I**

Sl.No	Name of the staff
1	Prof. S. B. Pattadkal
2	Prof. B.G. Mirji
3	Prof. S Y Achakanalli
4	Prof. C N Chougulae
5	Prof. N D Adigonde
6	Prof. M.S. Yadagiri
7	Prof. A B Patil



Head

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DEPARTMENT OF PHYSICS & ELECTRONICS

Value Added Course –Regulated power supply


ADMISSION LIST 2018-19 Batch-I

Sl. No	Roll No.	Name of the student
1	1	Bhagyashri. B. Birsadar
2	2	Girimallapa. P. Aralagundagi
3	3	Ambarish. H. Navi
4	4	Shridhar. Khundapur
5	5	Bhouramma. B. Bagalakoti
6	6	vittal. k. maranoor
7	7	AbhiShek. D. AShtekar
8	8	Kirankumar. B. Patil
9	9	Prabhakar. G. Jalawadi
10	10	IShwarKumar. M. H
11	11	Anun. R. Konadi
12	12	Bandenamar. mullagar
13	13	Shasankumar. R. Dixitt
14	14	Suma. M. Hugar
15	15	Aishwarya. Jangimmath
16	16	Deepa. V. Rathod
17	17	Bhagya. M. Nadagouda
18	18	Prema. Koralli
19	19	Aishwarya. Y. Kotali
20	20	Vijayalaxmi. S. Navi
21	21	Sangamesh. S. Alukoppur
22	22	Umesh. C. Baker
23	23	Shredhar. S. H.
24	24	Anand. K. Sasnur
25	25	Rani. Jumndi
26	26	Bhagyashree. R. Patil
27	27	Shraddha. V. Awaradi
28	28	Kaveri. N. Bhavikatti
29	29	Suresh. B. Allagi




Sl. No	Roll No.	Name
30	30	Balakrishna. Puthani
31	31	Shameena. M. Halli
32	32	Nikita. S. Gadaveer
33	33	Pooja. V. Saboji
34	34	Ashwini. A. Hadimani
35	35	Seema. R. Biradar
36	36	Pooja. A. Akkiwad
37	37	Neelamma. A. Solapur
38	38	Heerakougar. B. Kakhandaki
39	39	Deepa. S. Kenchappanavar
40	40	Ankita. K. Badiger
41	41	Kavya. B. Kallimath
42	42	Shruti. M. Benni
43	43	Pooja. S. Kallimath
44	44	Bhumika. A. Hosamani
45	45	Preeti. C. Satihal
46	46	Pavitra. S. Tawariched
47	47	Nivedita. Ghate
48	48	Sahana. wale
49	49	Sushma. Nidoni
50	50	Pooja. M. Khadase

  
HOD

  
Head  
Department of Physics  
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DEPARTMENT OF PHYSICS & ELECTRONICS

Date: 15-7-2018

## Value Added Course

### Notice

It is here by informed that the "Value added course" (Regulated Power Suppl) theory & practicals will commence from 20-07-2018 for the academic year 2018-19.

Students those who are selected, attend the classes regularly without fail.

  
Head of the Department.

  
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DEPARTMENT OF PHYSICS & ELECTRONICS  
*Value Added Course – Regulated power supply*


Time Table 2018-19

Batch -I

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
5.00pm To 6.00 pm					Theory 1	Theory II	
9.00 am To 11.00 am							Practical

  
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HOD  
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Department of Physics  
S.B.Arts & K.C.P.Science College  
Vijayapur-586103.





Sl. No	Roll No.	Name of the student	20-7-18	21-7-18	27-7-18	28-7-18	3-8-18	4-8-18	10-8-18	11-8-18	17-8-18	18-8-18	24-8-18	25-8-18	31-8-18	1-9-18	7-9-18	8-9-18	14-9-18	15-9-18	21-9-18	29-9-18
36	36	Pooja. A. AKTAWAD	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
37	37	Neelamma. A. Solapur	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S
38	38	Heenakousar. B. kakharabde	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
39	39	Deepa. S. Kindhappanann	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
40	40	Ankita. K. Badiger	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
41	41	Kanya. B. Kalliwath	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
42	42	Shruti. M. Bonni	Sw	Sw	Sw	Sw	Sw	Sw	Sw	Sw	Sw	Sw	Sw	Sw	Sw	Sw	Sw	Sw	Sw	Sw	Sw	Sw
43	43	PooJA. S. KALLIMATH	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK	BK
44	44	Bhumika. A. Hosomoni	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
45	45	Preeti. C. Satihal.	PCS	PCS	PCS	PCS	PCS	PCS	PCS	PCS	PCS	PCS	PCS	PCS	PCS	PCS	PCS	PCS	PCS	PCS	PCS	PCS
46	46	Faaitra. S. Tamwarakhed	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
47	47	Nivedita. Lelate	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
48	48	Sahana. Wali	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
49	49	Sushma. Nidoni	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
50	50	Pooja. M. Khadase	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K

  
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Exam conducted

Sl. No	Roll No.	Name	27-7-18	29-7-18	5-8-18	12-8-18	19-8-18	26-8-18	2-9-18	30-9-18
30	30	Balajisiksha P. Patil	PDP	PDP	PDP	PDP	PDP	PDP	PDP	PDP
31	31	Shomeena. M. Halli	S.M. Halli	S.M. Halli	S.M. Halli	S.M. Halli	S.M. Halli	S.M. Halli	S.M. Halli	S.M. Halli
32	32	Mikita S. Chavre	CSL	CSL	CSL	CSL	CSL	CSL	CSL	CSL
33	33	Pooja. u. Saboji	Pst	Pst	Pst	Pst	Pst	Pst	Pst	Pst
34	34	Ashwini. A. Hadimari	Pst	Pst	Pst	Pst	Pst	Pst	Pst	Pst
35	35	Seema. R. BIRADAR	S.R.B	S.R.B	S.R.B	S.R.B	S.R.B	S.R.B	S.R.B	S.R.B
36	36	Pooja. A. AKKIWAD	Pst	Pst	Pst	Pst	Pst	Pst	Pst	Pst
37	37	Neelamma. A. Solapur	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S	N.A.S
38	38	Hemakumar. T. Kalkhandak	H	H	H	H	H	H	H	H
39	39	Deepa. S. Kenchappanavar	Pst	Pst	Pst	Pst	Pst	Pst	Pst	Pst
40	40	Ankita. K. Badiger	KA	KA	KA	KA	KA	KA	KA	KA
41	41	Kavya. B. Kalkinath	KVK	KVK	KVK	KVK	KVK	KVK	KVK	KVK
42	42	Shruti. M. Banni	SMB	SMB	SMB	SMB	SMB	SMB	SMB	SMB
43	43	POOJA. S. KALLIMATH	Pst	Pst	Pst	Pst	Pst	Pst	Pst	Pst
44	44	Bhuvanika. A. Hosamani	ISH	ISH	ISH	ISH	ISH	ISH	ISH	ISH
45	45	Preeti. C. Satihal	P.C.S	P.C.S	P.C.S	P.C.S	P.C.S	P.C.S	P.C.S	P.C.S
46	46	Pavitra. S. Tawarakhed	Pst	Pst	Pst	Pst	Pst	Pst	Pst	Pst
47	47	Mirelita. Ghate	MG	MG	MG	MG	MG	MG	MG	MG
48	48	Sahana. Wali	SW	SW	SW	SW	SW	SW	SW	SW
49	49	Sushma Nidoni	SND	SND	SND	SND	SND	SND	SND	SND
50	50	Pooja. M. Khadase	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K	P.M.K

*(Signature)*

**Head**  
Department of Physics  
S.B.Arts & K.C.P.Science College  
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*(Signature)*

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DEPARTMENT OF PHYSICS & ELECTRONICS  
Value Added Course Examination 2018-19

Batch- I

Date: 21-09-2018

Notice

The value added course theory & practical examinations will be conducted on the below dates. All the students attend both the exams without fail.]

	Date	Time
Theory	29-09-2018	9am to 12 noon
Practical	30-09-2018	9am to 12 noon



Co coordinator

**IQAC, Co-ordinator**  
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Head of the Department.  
Head

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DEPARTMENT OF PHYSICS & ELECTRONICS

Value Added Course Examination

Subject code: SBKCPPHY01

Time: 03 hour

Max. Marks: 60

Answer any six questions:

(10x6=60)

- 1a). Explain the identification of carbon resistor value by colour code.
- b). Give the principle of transformer. Explain its working.
2. Describe the testing of electronic components using multimeter.
3. Explain the terms  
Amplitude, Time period, Frequency, Wave length, Phase,
4. Explain the terms
  - a) RMS value of current, Power of an ac circuit, 2x2=4
  - b) Inductive reactance, capacitive reactance 3x2=6
- 5a). Explain the working of Half wave rectifier with neat diagram.
- b) Explain the working of capacitor filter with neat diagram.
- 6a). Explain the working of Full wave rectifier with neat diagram.
- b) Explain the working of Inductor filter with neat diagram.
7. Explain the working & characteristics of Zener diode with suitable diagram.
8. Explain the working of
  - a) 78xx IC
  - b) Dual power supply



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DEPARTMENT OF PHYSICS & ELECTRONICS

Value Added Course Practical Examination

List of Question Slips

Subject code: SBKCPPIHY01

Time: 03 hour

Max. Marks: 40

1. Set up half wave & full wave rectifiers using semiconductor diodes. Study the variation of voltage with load. Calculate percentage of regulation.
2. Set up full wave bridge rectifier. Study the variation of voltage with load. Calculate percentage of regulation.
3. Set up full wave rectifier with capacitor filter. Study the variation of voltage with load. Calculate percentage of regulation.
4. Set up full wave rectifier with Inductor-capacitor filter. Study the variation of voltage with load. Calculate percentage of regulation.
5. Study the characteristics of zener diode. Mark the break down voltage & break down region on the graph . Calculate resistance of zener diode.
6. Set up dual power supply. Study its dual characteristics.



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Department of Physics & Electronics

VALUE ADDED COURSE 2018-19  
Batch-I

MARKS LIST

Roll No.	Name of the Students	Marks		
		Theory	Practical	Total
1	BhagyaShri. B. Biradan	46	35	81
2	Gisimallappa. P. Aralagundari	49	37	86
3	Ambarish. H. Navi	52	36	88
4	Shiridhar. Khanapur	45	38	83
5	Bhouramma. B. Bagalakoti	55	37	92
6	vittal. K. maranoor	47	34	81
7	Abhishek. D. Astekar	32	33	65
8	Kirankumar. B. Patil	36	34	70
9	Prabhakar. G. Jalawadi	48	35	83
10	IShwarkumar. M. H	54	37	91
11	Arun. R. Koradi	50	36	86
12	Bandanaonaz. Mullagol	49	38	87
13	Shasankumar. R. Dixit	33	36	69
14	Suma. M. Hugar	39	35	74
15	Aishwarya. Janginamath	44	33	77
16	Deepa. v. Rathod	53	37	90
17	Bhagya. m. Nadagouda	55	38	93
18	Prema. Koralli	47	36	83
19	Aishwarya. Y. Kotali	48	37	85
20	vijayalaxmi. S. Navi	39	34	73
21	Dangamesh. S. Alukoppur	49	37	86
22	Umesh. C. Bake	53	38	91
23	Shreedhar. S. H.	50	35	85
24	Anand. K. Sasarur	41	32	73
25	Rani. Jumanal	46	36	82
26	BhagyaShree. R. Patil	54	38	92
27	Shraddha. V. Awaradi	51	35	86

Roll No.	Name of the Students	Marks		
		Theory	Practical	Total
28	Kaveri. N. Bhavikatti	49	35	84
29	Suresh. B. Allagi	53	37	90
30	Bhalakrishna. puthani	45	34	79
31	Shamuna. M. Hlawi	47	34	81
32	Nikita. S. Gidaveer	54	36	90
33	Pooja. U. Saboji	49	33	82
34	ASHwini. A. Hadimani	51	35	86
35	Veema. R. Biradar	50	38	88
36	Pooja. A. AKtiwad	44	35	79
37	Neelamma. A. Solapur	47	36	83
38	Heerakougar. B. Kakhandaki	52	37	89
39	Deepa. S. Kenchappanavar.	45	36	81
40	Ankita. K. Badiger	50	35	85
41	kavya. B. kallimath	33	34	67
42	Shruti. M. Banni	38	35	73
43	Pooja. S. kallimath	47	34	81
44	Bhumika. A. Hosamani	54	37	91
45	Preeti. C. Satihal	52	35	87
46	Pavitra. S. Tawarshed	49	39	88
47	Nividita. Ghote	44	37	81
48	Sahana. wali	51	36	87
49	Sibhna. Nidoni	54	38	92
50	pooja. M. Khadase	48	36	84

  
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**S.B. ARTS AND K.C.P. SCIENCE COLLEGE, BIJAPUR**  
**DEPARTMENT OF PHYSICS & ELECTRONICS**

## Value Added Course on Regulated Power Supply

### Report on Course Outcome

Our Department has conducted Value added course for B.Sc students (Batch-I) on Regulated Power Supply for the academic year 2018-19. The duration of the certificate course is 30 hrs. Theory and practical classes were conducted for 50 students who have enrolled their names for the course.

A regulated power supply is an embedded circuit; it converts unregulated AC (Alternating Current) into a constant DC (Direct Current). With the help of a rectifier it converts AC supply into DC. Its function is to supply a stable voltage, to a circuit or device that must be operated within certain power supply limits. A regulated power supply with multiple regulators can offer multiple output voltages for operating different devices. Regulated power supplies maintain the voltage at the desired level and are ideal for almost all types of electronic devices because of the smooth, steady supply of voltage they offer.

The use of regulated power supply is very simple. When it is in use, attention should be paid to the polarity of the required DC voltage. If a positive voltage needs to be output, the output end of the DC voltage regulated power supply "-" connects with the "ground" end of the electrical equipment, and the terminal "+" should be connected to the required positive voltage terminal. If you need to output negative voltage, you need to reverse the above wiring method. Before electrifying, measure it with a multimeter to check whether the output voltage meets the requirements, so as to avoid excessive voltage damage to the electrical equipment.

Advantages for Regulated power supplies include simplicity, reliability, low noise levels and low cost. These power supplies, also known as linear regulators (L.R), have a very simple design in that they require few components making it an easy device for design engineers to work with



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*Internal Quality Assurance Cell Initiative*

**VALUE ADDED COURSE**

*Certificate*



This is to certify that Mr./Ms. Pavitra S. Tawarkhed


has Completed the Value Added Course on Regulated Power Supply

Conducted by the Department of Physics during the

Year 2018-19

  
Head of the Department

  
IQAC, Co-ordinator  
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Co-Ordinator, IQAC

  
Principal,  
S.B. Arts and KCP Science College  
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*Internal Quality Assurance Cell Initiative*

**VALUE ADDED COURSE**

*Certificate*



This is to certify that Mr./Ms. Nivedita Ghate

has Completed the Value Added Course on Regulated Power Supply

Conducted by the Department of Physic during the

Year 2018-19

  
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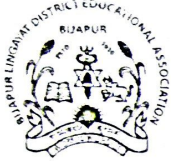
  
**Head of the Department**

  
**Co-Ordinator, IQAC**

  
**Principal,**  
S.B. Arts and KCP Science College  
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**Principal**





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*Internal Quality Assurance Cell Initiative*

**VALUE ADDED COURSE**

*Certificate*




This is to certify that Mr./Ms. Sahana . Wali


has Completed the Value Added Course on Regulated Power Supply

Conducted by the Department of Physic during the

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*Internal Quality Assurance Cell Initiative*

**VALUE ADDED COURSE**

*Certificate*



This is to certify that Mr./Ms. Sushma Nidoni

has Completed the Value Added Course on Regulated Power Supply

Conducted by the Department of Physics during the

Year 2018-19

  
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*Internal Quality Assurance Cell Initiative*

**VALUE ADDED COURSE**

*Certificate*

This is to certify that Mr./Ms. Bhagyashri B. Biradar

has Completed the Value Added Course on Regulated Power Supply

Conducted by the Department of Physics during the

Year 2018-19

  
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*Co-Ordinator, IQAC*

  
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**Department of Physics & Electronics**

**VALUE ADDED COURSE ON  
REGULATED POWER SUPPLY  
BATCH-II  
2018-19**

**(For B.Sc Physics & Electronics)**

**B.L.D.E. Association's**  
**S.B. ARTS AND K.C.P. SCIENCE COLLEGE, VIJAYAPUR**

**Department of Physics & Electronics**


**VALUE ADDED COURSE**

**CONTENTS**

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1	Syllabus
2	Admission Notice
3	List of faculty
4	List of Students
5	Time table
6	Student Attendance
7	Exam. time table notice
8	Question paper -Theory
9	Question paper -Practical
10	Marks list
11	Report on Course Outcome

  
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**S.B. ARTS AND K.C.P. SCIENCE COLLEGE, VIJAYAPUR**  
**Department of Physics & Electronics**

**Value added Course for B.Sc Physics & Electronics**

**Course Title:** Regulated Power Supply

**Course Code:** SBKCP PHY01

**AIM**

To ensure excellent standards that would secure them international acclimation and leadership in tremendous challenging world.

To developing the overall personality of its students by making them not only excellent professionals but also good individuals with understanding and regard for human values.

**OBJECTIVES:**

To provide additional learners-centric graded skill oriented technical training with primary objectives of improving the employability skill.

To provide students an understanding of expectations of industry.

To provide an opportunity to develop inter-disciplinary skills.

To identify and develop the talents of students community in both curricular and extra-curricular areas.

**VISION:**

To be a centre of excellence through the process of self evaluation and continual renewal in all our endeavours, namely, learning, teaching, research, consultancy and other related services.

**MISSION:**

We strive towards equipping young people with value based holistic education to provide them a participative and growth oriented ambience.

**I. SYLLABUS****Total hours allotted : 30 hours**

**Unit I:** Basic elements (Resistor, Inductor & Capacitor) & its working. Colour coding of resistor & current rating of resistance. Transformers its principal working, types of transformer current rating of transformer. Multimeter & testing of components using multimeter

4 hours

**Unit II:** Instantaneous current time period, frequency, wavelength, peak or maximum amplitude, peak to peak value, effective current or RMS value of current & voltage, the average current & Voltage, power in ac ckt. Phase & phase difference. Inductive reactance & capacitive reactance.

4 hours

**Unit III:** Working of half wave, full wave & bridge rectifier. Rectifier with capacitor filter (shunt capacitor filter), with series inductor filter, LC filter &  $\pi$ -section filter. Ripple factor, efficiency & voltage regulation for each filter.

6 hours

**Unit IV: Zener diode:** Its working & characteristics, zener diode is used as regulated power supply. Design consideration with one example. Concept of IC, Three pin IC regulator block diagram, 78xx series & 79xx series. Dual power supply.

6 hours

**Practicals:** Five practical's of two hour duration

10 hours

### List of experiments

1. Half wave, full wave & bridge rectifier
2. Rectifier with capacitor filter (shunt capacitor filter)
3. Rectifier with LC filter &  $\pi$ -section filter.
4. Characteristics, zener diode & used as regulated power supply.
5. Dual power supply.

### Note:

1. Experiments are of two hours duration.
2. Five experiments to be performed.

### Reference books

- 1) Solid state electronics by Agarawal & Agarawal
- 2) Basics electronics by B.K. Bagade & Singh
- 3) Principales of electronics by Malivno
- 4) Electricity & magnetism by Murgeshan
- 5) Electricity & magnetism by Brijjal & shubruman

## II. Duration of the Course:

Theory of twenty hours and Practical ten hours **Total 30 Hours**

## V. Evaluation:

Students will be evaluated through the examination conducted by the physics department at the end of the course and they will be awarded course certificate accordingly.

Theory Paper of 60 marks

Practical of 40 marks

Total 100 marks



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**DEPARTMENT OF PHYSICS & ELECTRONICS**


Date: 20-12-18

## Value Added Course

### Notice

Our Department is conducting "Value added course" (30 hours duration) on "Regulated Power Supply" for B.Sc. Students in Physics & Electronics during the year 2018-19. Interested Students give their names to Head of the Department on or before 25-12-18.

Certificate will be issued to students after completing the Value Added Course from the College.

  
Head of the Department.  
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**DEPARTMENT OF PHYSICS & ELECTRONICS**

***Value Added Course – Regulated power supply***

**List of the faculty**

**2018-19**

**Batch - II**

Sl.No	Name of the staff
1	Prof. S. B. Pattadkal
2	Prof. B.G. Mirji
3	Prof. S Y Achakanalli
4	Prof. C N Chougulae
5	Prof. N D Adigonde
6	Prof. M.S. Yadagiri
7	Prof. A B Patil



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**DEPARTMENT OF PHYSICS & ELECTRONICS**  
**Value Added Course –Regulated power supply**  
**ADMISSION LIST 2018-19 Batch-II**

Sl. No	Roll No.	Name of the student
1	1	Preeti Biradar
2	2	Priyanka
3	3	Sudharani. S. Metri
4	4	Roopa. S. Sarwad
5	5	Shruti. S. Ganiger
6	6	Pooja. I. Hiroli
7	7	Geeta. I. Bijjaragi
8	8	Shrishail. S. Maadewal
9	9	Sunil. B. Pujari
10	10	Raviprasad. A.
11	11	Mallikarjun. S. Patil
12	12	Swati. L. Bijjaragi
13	13	Bhavani. S. Tadalagi
14	14	Amagond. Peeragond
15	15	Gururaj. Metri
16	16	Hareenkumar. Metri
17	17	Sushma. S. Siddapur
18	18	Chaitra. S. Sabarad
19	19	Sabaraddy
20	20	Sagar. Karajagi
21	21	Namita. M. Soorimath
22	22	Shweta. S. Hadapad
23	23	Sushma. R. Malakaravar
24	24	Nisarga. S. Hiraskar
25	25	Gururagoud. S. Biradar
26	26	A.A. Kumbhar
27	27	Asma. B. Mujawar
28	28	Shambhan. Kate
29	29	Sushma. V. Hiremath

Sl. No	Roll No.	Name
30	30	Pooja .M. Biradar
31	31	Bhagyashree .M. Kotragasti
32	32	Shweta .R. Basaragi.
33	33	Apeksha .B. Karajagi
34	34	Chaitra .B. Dhanapal
35	35	Pooja .B. Pallar
36	36	Suman .M. Badadani
37	37	Sahana .V. Kulkarni
38	38	Rachana .M. Isaraddi
39	39	Pushpanjali
40	40	Preeti Rajendra Biradar
41	41	Preeti .V. Hiremath
42	42	Pratiksha .S. Malaghar
43	43	Pooja .S. Satihal
44	44	Abhishek .B. Talakeri
45	45	Kalmesh .Utagi
46	46	Ameesha Nadab
47	47	Laxshmi .Gumate
48	48	Vidyashree .A. Nadikar
49	49	Akshay .A. Mavali
50	50	Soujanya .R. Baragali



HOD  
Head

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**DEPARTMENT OF PHYSICS & ELECTRONICS**

Date: 1-1-2019

**Value Added Course**

**Notice**

It is here by informed that the "Value added course" (Regulated Power Suppl) theory & practicals will commence from 4-1-2019 for the academic year 2018-19.

Students those who are selected, attend the classes regularly without fail.



Head of the Department.

**Head**

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DEPARTMENT OF PHYSICS & ELECTRONICS  
*Value Added Course – Regulated power supply*


Time Table 2018-19

Batch -II

Time	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
5.00pm To 6.00 pm					Theory 1	Theory II	
9.00 am To 11.00 am							Practical

  
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HOD  
**Head**  
Department of Physics  
S.B.Arts & K.C.P.Science College  
Vijayapur-586103.








Exam Conducted

(3)

Sl. No	Roll No.	Name of the student	4-1-19	5-1-19	11-1-19	12-1-19	18-1-19	19-1-19	25-1-19	26-1-19	1-2-19	2-2-19	8-2-19	9-2-19	15-2-19	16-2-19	22-2-19	23-2-19	1-3-19	2-3-19	8-3-19	13-4-19	
36	36	Suman. M. Badadani	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
37	37	Sahana. V. Kulkarni	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV	SV
38	38	Rachana. M. Sasadi	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS	RS
39	39	Jushpanjali	JP	JP	JP	JP	JP	JP	JP	JP	JP	JP	JP	JP	JP	JP	JP	JP	JP	JP	JP	JP	JP
40	40	Poojati. Rajendra Biradar	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR
41	41	Poojati V. Hingmath	PH	PH	PH	PH	PH	PH	PH	PH	PH	PH	PH	PH	PH	PH	PH	PH	PH	PH	PH	PH	PH
42	42	Pratiksha. S. Malaghar	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM
43	43	Pooja. S. Sathai	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS
44	44	Abhishek. B. Talakeri	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT	AT
45	45	Kalmesh. V. Tagi	KT	KT	KT	KT	KT	KT	KT	KT	KT	KT	KT	KT	KT	KT	KT	KT	KT	KT	KT	KT	KT
46	46	Ameesha. Nadaf	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN	AN
47	47	Lakshmi. Umate	LU	LU	LU	LU	LU	LU	LU	LU	LU	LU	LU	LU	LU	LU	LU	LU	LU	LU	LU	LU	LU
48	48	Vidyaashree. A. Natikan	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA	VA
49	49	Akshay. A. Masali	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM
50	50	Soujanya. R. Baragali	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR	SR

  
**Head**  
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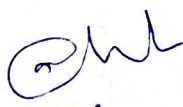
  
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Exam conducted}

Sl. No	Roll No.	Name	13-1-19	20-1-19	27-1-19	3-2-19	10-2-19	17-2-19	24-2-19	14-4-19
30	30	Pooja.m. Bizardar	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
31	31	Bhagyashree.M.Kotragast?	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
32	32	Shweta. R. Basaragi	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
33	33	Apeksha. B. Karajga	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
34	34	Chaitra. B. Dhanapal	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
35	35	Pooja -B. Pattar	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
36	36	Suman. M. Badadani	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
37	37	Sahana. V. Kulkarni	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
38	38	Rachana. M. Isaraddi	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
39	39	Pushpanjali	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
40	40	Pooji. Rajendra. Bivadar	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
41	41	Pooji. v. Hiramath	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
42	42	Pratiksha. Simalaghan	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
43	43	Pooja. S. Sadihal	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
44	44	Abhishek. B. Talakeri	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
45	45	Kalmesh. Utagi	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
46	46	Ameekha. Nadda	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
47	47	Lakshmi. N. Gumade.	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
48	48	Vidyashree. A. Natikan	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
49	49	Akshay A majari	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B
50	50	Soujanya. R. Basaragi	P.B	P.B	P.B	P.B	P.B	P.B	P.B	P.B



**Head**  
Department of Physics  
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**DEPARTMENT OF PHYSICS & ELECTRONICS**  
**Value Added Course Examination 2018-19**

**Batch- II**

Date: 3-4-2019


**Notice**

The value added course theory & practical examinations will be conducted on the below dates. All the students attend both the exams without fail.

	Date	Time
Theory	13-04-2019	9am to 12 noon
Practical	14-04-2019	9am to 12 noon



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Head of the Department.  
**Head**  
Department of Physics  
S.B.Arts & K.C.P.Science College  
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DEPARTMENT OF PHYSICS & ELECTRONICS

Value Added Course Examination

Subject code: SBKCPPHY01

Time: 03 hour

Max. Marks: 60

Answer any six questions:

(10x6=60)

- 1a). Explain the identification of carbon resistor value by colour code.
- b). Give the principle of transformer. Explain its working.
2. Describe the testing of electronic components using multimeter.
3. Explain the terms  
Amplitude, Time period, Frequency, Wave length, Phase,
4. Explain the terms  
a) RMS value of current, Power of an ac circuit, 2x2=4  
b) Inductive reactance, capacitive reactance 3x2=6
- 5a). Explain the working of Half wave rectifier with neat diagram.
- b) Explain the working of capacitor filter with neat diagram.
- 6a). Explain the working of Full wave rectifier with neat diagram.
- b) Explain the working of Inductor filter with neat diagram.
7. Explain the working & characteristics of Zener diode with suitable diagram.
8. Explain the working of  
a) 78xx IC  
b) Dual power supply



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S.B. ARTS AND K.C.P. SCIENCE COLLEGE, BIJAPUR

DEPARTMENT OF PHYSICS & ELECTRONICS

Value Added Course Practical Examination

List of Question Slips

Subject code: SBKCPPIY01

Time: 03 hour

Max. Marks: 40

1. Set up half wave & full wave rectifiers using semiconductor diodes. Study the variation of voltage with load. Calculate percentage of regulation.
2. Set up full wave bridge rectifier. Study the variation of voltage with load. Calculate percentage of regulation.
3. Set up full wave rectifier with capacitor filter. Study the variation of voltage with load. Calculate percentage of regulation.
4. Set up full wave rectifier with Inductor-capacitor filter. Study the variation of voltage with load. Calculate percentage of regulation.
5. Study the characteristics of zener diode. Mark the break down voltage & break down region on the graph . Calculate resistance of zener diode.
6. Set up dual power supply. Study its dual characteristics.



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Department of Physics & Electronics

VALUE ADDED COURSE 2018-19  
Batch-II

MARKS LIST

Roll No.	Name of the Students	Marks		
		Theory	Practical	Total
1	Preeti Biradar	49	36	85
2	Priyanka	54	38	92
3	Sudhasani S. Metri	47	35	82
4	Roopa S. Sarwad	40	34	74
5	Shouti S. Ganiger	45	36	81
6	Pooja I. Hissoli	52	37	89
7	Geeta T. Bijjaragi	44	32	76
8	Shoishail S. Mandewal	48	36	84
9	Sunil B. Pujari	44	34	78
10	Raviprasad A.	47	35	82
11	Mallikarjun S. Patil	49	34	83
12	Swati L. Bijjaragi	53	37	90
13	Bhavani S. Tadalagi	50	34	84
14	Amagond. Peeragoud	38	32	70
15	<del>Gururagoud S. Biradar</del> Metri	33	30	63
16	<del>A.A. Kumbhar</del> Naveenkumar, Metri	54	35	89
17	<del>A</del> Sushma S. Siddapur	47	33	80
18	Chaitra S. Sabarad	42	34	76
19	Saba reddy	45	35	80
20	Sagar Karajagi	41	33	74
21	Namita M. Soorimath	49	37	86
22	Shweta S. Hadapad	55	38	93
23	Sushma R. Mahakaravar	52	36	88
24	Nisarga S. Hivaskar	32	30	62
25	Gururagoud S. Biradar	48	37	85
26	A.A. Kumbhar	53	35	88
27	Asma B. Mujawar	44	32	76

Roll No.	Name of the Students	Marks		
		Theory	Practical	Total
28	Shambhan Kate	47	34	81
29	Sushma V. Hiremath	44	35	79
30	Pooja M. Biradar	55	39	94
31	Bhagyashree M. Kotragasti	38	32	70
32	Shweta R. Basaragi	34	33	67
33	Apeksha B. Karajagi	49	37	86
34	Chaitra B. Dhanapal	53	38	91
35	Pooja B. Palkar	48	35	83
36	Surbhan M. Badadani	39	34	73
37	Sahana V. Kulkarni	57	36	93
38	Rachana M. Isaraddi	46	37	83
39	Purushpanjali	40	35	75
40	Preeti Rajendra Biradar	42	34	76
41	Preeti V. Hiremath	53	37	90
42	Pratiksha S. Malagham	48	36	84
43	Pooja S. Satihal	55	39	94
44	Abhishek B. Talakeri	41	36	77
45	Kalmesh, Utagi	37	34	71
46	Ameesha Nadaf	49	37	86
47	Laxshmi Gumate	54	38	92
48	Vidyashree A. Natikar	46	35	81
49	Akshay A. Masali	39	34	73
50	Soujanya R. Baragali	52	38	90



Head

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**DEPARTMENT OF PHYSICS & ELECTRONICS**

## Value Added Course on Regulated Power Supply

### Report on Course Outcome

Our Department has conducted Value added course for B.Sc students (Batch-II) on Regulated Power Supply for the academic year 2018-19. The duration of the certificate course is 30 hrs. Theory and practical classes were conducted for 50 students who have enrolled their names for the course.

A regulated power supply is an embedded circuit; it converts unregulated AC (Alternating Current) into a constant DC (Direct Current). With the help of a rectifier it converts AC supply into DC. Its function is to supply a stable voltage, to a circuit or device that must be operated within certain power supply limits. A regulated power supply with multiple regulators can offer multiple output voltages for operating different devices. Regulated power supplies maintain the voltage at the desired level and are ideal for almost all types of electronic devices because of the smooth, steady supply of voltage they offer.

The use of regulated power supply is very simple. When it is in use, attention should be paid to the polarity of the required DC voltage. If a positive voltage needs to be output, the output end of the DC voltage regulated power supply "-" connects with the "ground" end of the electrical equipment, and the terminal "+" should be connected to the required positive voltage terminal. If you need to output negative voltage, you need to reverse the above wiring method. Before electrifying, measure it with a multimeter to check whether the output voltage meets the requirements, so as to avoid excessive voltage damage to the electrical equipment.

Advantages for Regulated power supplies include simplicity, reliability, low noise levels and low cost. These power supplies, also known as linear regulators (LR), have a very simple design in that they require few components making it an easy device for design engineers to work with



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*Internal Quality Assurance Cell Initiative*

**VALUE ADDED COURSE**

*Certificate*




This is to certify that Mr./Ms. Pratiksba . S. Malaghar.

has Completed the Value Added Course on Regulated Power supply.

Conducted by the Department of Physics during the

Year 2018 - 19

  
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**Co-Ordinator, IQAC**

  
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*Internal Quality Assurance Cell Initiative*

### VALUE ADDED COURSE

## Certificate




This is to certify that Mr./Ms. Naveen Kumar. Metri

has Completed the Value Added Course on Regulated Power Supply

Conducted by the Department of Physics during the

Year 2018-19

  
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**Head of the Department**

  
**Co-Ordinator, IQAC**

  
**Principal,**  
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**Principal**



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**VALUE ADDED COURSE**

*Certificate*



This is to certify that Mr./Ms. Preeti. V. Hiremath

has Completed the Value Added Course on Regulated Power Supply

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### VALUE ADDED COURSE

## Certificate



This is to certify that Mr./Ms. Pooja . B . Pattar.

has Completed the Value Added Course on Regulated Power supply

Conducted by the Department of Physics during the

Year 2018 - 19

  
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Vijayapur. Co-Ordinator, IQAC

  
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### VALUE ADDED COURSE

## *Certificate*




This is to certify that Mr./Ms. Bhagyashree . M . Kotragasti

has Completed the Value Added Course on Regulated Power supply

Conducted by the Department of Physics during the

Year 2018-19

  
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Head of the Department

  
Co-Ordinator, IQAC

  
Principal,  
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